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PREPRUFE® 300R/160R Plus & PREPRUFE® 300R/160R Plus LT Data Sheet

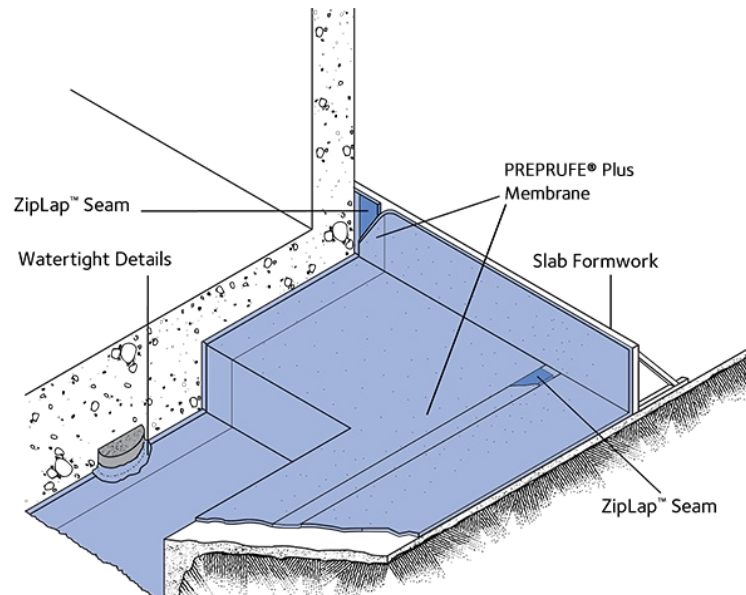
Pre-applied waterproofing membranes that bond integrally to poured concrete for use below slabs or behind basement walls on confined sites.

[View Sustainability Certifications: 300R Plus, 160R Plus, 300R Plus LT, 160R Plus LT](#)

Product Description

GCP PREPRUFE® 300R/160R Plus pre applied waterproofing membranes are unique composite sheets comprised of a thick HDPE film, pressure sensitive adhesive, and weather resistant protective coating. Designed with Advanced Bond Technology™ and dual adhesive ZipLap™ seams, PREPRUFE® 300R/160R Plus form a unique, integral bond to poured concrete. This integral bond is specifically designed to provide a robust barrier to water, moisture and gas and prevents both the ingress and lateral migration of water.

PREPRUFE® 300R/160R Plus are release liner free and designed for efficient, reliable installation. PREPRUFE® Plus ZipLap™ seams allow for an adhesive to adhesive bond at membrane sheet overlaps and deliver superior performance in harsh conditions without the need for specialized equipment, heat or power.



Drawings are for illustration purposes only.
Please refer to gcpat.com for specific application details.

Advantages

- The unique continuous adhesive bond to concrete poured against it prevents water migration and makes it unaffected by ground settlement beneath slabs.
- Designed with fully adhered adhesive to adhesive watertight ZipLap™ seams and easy to execute detailing. Provides a barrier to water, moisture and gas physically isolating the structure from the surrounding substrate. Easy roll/kick out installation reduces installation time and cost.
- Release liner free, expedites installation and reduces construction site waste.
- Simple and quick to install requiring no priming or fillets.
- Can be applied to permanent formwork - allows maximum use of confined sites
- Self-protecting - can be trafficked immediately after application and ready for immediate placing of reinforcement
Membrane is unaffected by wet jobsite conditions - cannot activate prematurely
- Inherently waterproof as supplied. Passive non-reactive waterproofing system does not require water activation
Waterproofing is not reliant on confining pressures or hydration
- PREPRUFE® 300R/160R Plus unaffected by freeze/thaw, wet/dry cycling
- Chemical resistance – designed to help protect structure from salt or sulphate attack effective in most types of soils and waters,
- Gas resistance – PREPRUFE® 300R/160R Plus will restrict the ingress of Methane, Radon, Benzene, Toluene, Gasoline & other VOCs Trichloroethylene & Tetrachloroethylene (TCE/PCE) into buildings from landfill and naturally occurring sources and satisfy the performance criteria for a gas-resistant membrane.

System Components:

Membrane

- PREPRUFE® 300R Plus/300R Plus LT— heavy-duty 46mil grade membrane designed for horizontal and vertical use. Designed for use below slabs and on rafts (i.e. mud slabs) and for vertical blind side applications. Designed to accept the placing of heavy reinforcement using conventional concrete spacers.
- PREPRUFE® 160R Plus/160R Plus LT — 32mil grade membrane designed for vertical use in blindside, zero property line applications against soil retention systems.

Ancillary Components (refer to the most current Data Sheets for all system components available on gcpat.com)

- PREPRUFE® Tape – 4 in. wide tape for covering cut edges, roll ends, penetrations and detailing
- PREPRUFE® CJ Tape – 8 in. wide tape for detailing, and may be used at construction joints for optional additional protection
- BITUTHENE® Liquid Membrane - for sealing around penetrations, etc.
- ADCOR® - hydrophilic waterstop for joints in concrete walls and floors
- PREPRUFE® Tieback Covers - preformed cover for soil retention wall tieback heads
- DE NEEF® INJECTO® Tube groutable Waterstop for non-moving concrete construction joints and penetrations

Limitations of Use

- Approved uses only include those uses specifically detailed in this Product Data Sheet and other current Product Data Sheets that can be found at gcpat.com
- PREPRUFE® 300R/160R Plus Membranes are not intended for any other use. Contact GCP Technical Services where any other use is anticipated or intended.
- PREPRUFE® 300R/160R Plus Membranes are designed for in-service temperatures below 120°F(49°C).
- PREPRUFE® 160R Plus/160R Plus LT membrane should not be used in horizontal applications.
- PREPRUFE® 300R/160R Plus Membranes should not be used with conventional two-sided formwork.
(See PREPRUFE® Technical Letter # 13 Forming Systems For Use with PREPRUFE® Membranes)

Special Note: When this information is printed from the gcpat.com global website, a footer appearing on this document will restrict its applicability to the United States. Note that the information and references in this document are hereby expanded and apply to North, Central and South America.

Safety and Handling

Users must read and understand the product label and Safety Data Sheets (SDS's) for each system component before use. All users should acquaint themselves with this information prior to working with the material. Carefully read detailed precaution statements on the product labels and SDS's before use. The most current SDS's can be obtained from the GCP web site at gcpat.com.

Storage

- Observe 1 year shelf life and use on a first in first out basis
- Store in dry conditions between 40°F (4.5°C)–90°F (32°C)
- Store off ground under tarps or otherwise protected from rain and ground moisture
- See PREPRUFE® Technical Letter #30 Shelf Life/Storage and Handling of GCP Waterproofing

Installation

Technical Support, Details and Technical Letters

The most up to date detail drawings and technical letters are available at gcpat.com. For complete application instructions, please refer to the current Literature on (www.gcpat.com). Documents in hardcopy as well as information found on websites other than www.gcpat.com may be out of date or in error. Before using this product it is important that information be confirmed by accessing www.gcpat.com and reviewing the most recent product information, including without limitation Product Data Sheets, Technical Bulletins, Detail Drawings and detailing recommendations. Please review all materials prior to installation of PREPRUFE® 300R/160R Plus.

Support is also available by full-time technically trained GCP field sales representatives and technical service personnel, backed by a central research and development technical services staff. For technical assistance with detailing and problem solving please contact your local representative. A GCP Representative locator is available at www.gcpat.com.

Temperature Requirements

- PREPRUFE® 160R Plus LT and PREPRUFE® 300R Plus LT membrane can be applied between temperature 25°F to 95°F. PREPRUFE® 300R Plus & PREPRUFE® 160R Plus membranes can be used for application above 65°F.
- PREPRUFE® Tape LT and PREPRUFE® CJ Tape LT can be applied between temperature 25°F to 95°F. PREPRUFE® Tape HC and PREPRUFE® CJ Tape HC can be used for application above 50°F.

Substrate Preparation

All surfaces –It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth with no gaps or voids greater than 0.5 in. (12 mm). Grout around all penetrations such as utility conduits, etc. for stability.

Horizontal – The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. When installing over earth or crushed stone, ensure substrate is well compacted to avoid displacement of substrate due to traffic or concrete pour. The surface does not need to be dry, but standing water must be removed.

Vertical – Use concrete, plywood, insulation or other approved facing over sheet piling to provide support to the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 0.5 in. (12 mm) out of alignment. HYDRODUCT® 220 drainage sheet can be used to bridge voids, gaps and out of alignment up to 2 in. (50mm) prior to PREPRUFE® 300R/160R Plus installation.

Membrane Application

PREPRUFE® 300R/160R Plus has a colored zip strips at the top and bottom of the seam area on the edge of the roll. Both zip strips cover an aggressive adhesive. Once the green zip strip on the top of the membrane and the blue zip strip on the bottom of the membrane are removed, a strong adhesive to adhesive bond is achieved in the overlap area. This PREPRUFE® ZipLap™ provides an enhanced sealing of the overlaps in harsh conditions combined with a fast and easy way of execution without specialized equipment, heat or power.

Horizontal substrates – (PREPRUFE® 300R Plus/ PREPRUFE® 300R Plus LT membrane only) – PREPRUFE® 300R Plus & PREPRUFE® 300R Plus LT membrane can be applied in horizontal applications to smooth prepared concrete, carton forms or well rolled and compacted earth or crushed stone substrate. Kick out or roll out the membrane HDPE film side to the substrate with the green zip strip facing towards the concrete pour. End laps should be staggered to avoid a build-up of layers. Leave green and blue zip strips on the membrane until overlap procedure is completed. When completed remove release liner. When installing over carton forms, contact your local GCP representative.

Accurately position succeeding sheets to overlap the previous sheet 3 in. (75 mm) along the marked selvedge with the blue zip strip on top of the green zip strip. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back and remove both the green and blue zip strips in the overlap area to achieve an adhesive to adhesive bond at the overlap.

Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller.

- PREPRUFE® 300R Plus/300R Plus LT membrane can be returned up the inside face of slab formwork. To attain a fully bonded system and to allow a tie in with BITUTHENE® self-adhered membrane or PROCOR® fluid-applied membrane to all vertical structural surfaces after removal of formwork. Ensure to cut the length of the membrane (terminate) to height of formwork less 2 inches.
- Rebar Chairs: See PREPRUFE® Technical Letter #15 Rebar Chairs on PREPRUFE® Membranes.
- PREPRUFE® 160R Plus & 160R Plus LT membrane may not be used in horizontal applications.

Vertical substrates – PREPRUFE® 300R/160R Plus membranes can be applied vertically to permanent formwork or adjoining structures. Mechanically fasten the membrane vertically using fasteners appropriate for the substrate with the green zip strip facing towards the concrete pour. The membrane may be installed in any convenient length. Fastening can be made through the selvedge within 0.5 in. (50 mm) from the leading edge of the membrane using a small low profile head fastener so that the membrane lays flat and allows firmly rolled overlaps. Accurately position each succeeding sheet to overlap the previous sheet 3 in. (75 mm) along the marked selvedge with the blue zip strip on top of the green zip strip.

Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back and remove both the green and blue zip strips in the overlap area to achieve an adhesive to adhesive bond at the overlap. Roll firmly to ensure a watertight seal.

Note that PREPRUFE® 300R/160R Plus membranes should not be used with conventional two-sided formwork. (See PREPRUFE® Technical Letter # 13 Forming Systems For Use with PREPRUFE® Membranes)

Roll ends and cut edges – Overlap all roll ends and cut edges by a minimum 3 in. (75 mm) and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Allow surface to dry and apply PREPRUFE® Tape centered over the lap edges and roll firmly. Immediately remove tinted plastic release liner from the tape.

Membrane Repair

Inspect the membrane before installation of reinforcement steel, formwork and final placement of concrete. The membrane can be easily cleaned by power washing if required. Repair damage by wiping the area with a damp cloth to ensure the area is clean and free from dust, and other contaminants and allow the membrane to dry. Repair small punctures and slices 0.5 in. (12 mm) or less by applying PREPRUFE® Tape centered over the damaged area. Repair punctures and holes larger than 0.5 in. (12mm) by applying a patch of PREPRUFE® Membrane. Extend the patch 6 in. (150 mm) beyond the damaged area. Seal all edges of the patch with PREPRUFE® Tape. Where exposed selvedge has lost adhesion or laps have not been sealed, ensure the area is clean and dry and cover with fresh PREPRUFE® Tape. Any areas of damaged adhesive should be covered with PREPRUFE® Tape. All PREPRUFE® Tape must be rolled firmly and the tinted release liner removed.

Slices or relief cuts can be butted or overlapped and repaired by applying PREPRUFE® Tape centered over the edge of the overlap or center of the butt joint. Where it is not possible to create a butt joint or overlap, repair with fresh membrane and PREPRUFE® Tape as detailed above.

Pouring of Concrete

Ensure the plastic release liner is removed from all PREPRUFE® Tapes.

Under most climatic conditions concrete should be poured within 56 days of membrane installation. Where ambient temperatures will exceed 100°F (38°C) for more than a total of 7 days, concrete should be placed within 42 days of installation of the membrane. Concrete must be placed and compacted carefully to avoid damage to the membrane. Never use a sharp object to consolidate the concrete.

Removal of Formwork

A minimum concrete compressive strength of 3000 psi (20 N/mm²) is required prior to stripping formwork supporting PREPRUFE® 300R/160R Plus Membranes. Premature stripping may result in displacement of the membrane and/or spalling of the concrete. (see PREPRUFE® Technical Letter #17 Removal of Formwork Placed against PREPRUFE® 300R/160R Plus Membranes).

After removal of the formwork and prior to backfilling, all exposed PREPRUFE® 300R/160R Plus Membrane must be protected from damage with an approved protective course.

Supply

Dimensions (Nominal)	PREPRUFE® 300R Plus PREPRUFE® 300R Plus LT	PREPRUFE® 160R Plus PREPRUFE® 160R Plus LT
Roll size Note#1	3 ft. 10 in. X 102 ft. (392 ft ²) 1.17m x 31.15m (36.4 m ²)	3 ft. 10 in. X 120 ft. (460 ft ²) 1.17m x 36.6m (42.8 m ²)
Roll weight	108 lbs (49 kg)	92 lbs (42 kg)
Minimum side/end laps	3 in. (75 mm)	3 in. (75 mm)
Note: when calculating coverage account for the Minimum side/end laps		
Note#1 Individual roll length may vary +/- 1%		

Physical Properties

Property	PREPRUFE® 300R Plus & PREPRUFE® 300R Plus LT	PREPRUFE® 160R Plus & PREPRUFE® 160R Plus LT	Test Method
Color	white	white	
Thickness	0.046 in. (1.2 mm)	0.032 in. (0.8 mm)	ASTM D3767
Lateral Water Migration Resistance	Pass at 231 ft (71 m) of hydrostatic head pressure	Pass at 231 ft (71 m) of hydrostatic head pressure	ASTM D5385 ¹
Long Term Lateral Water Migration Resistance, After 3 Years Water Immersion	Pass at 231 ft (71 m) of hydrostatic head pressure	Pass at 231 ft (71 m) of hydrostatic head pressure	ASTM D5385 ¹
Resistance to hydrostatic head	231 ft (71 m)	231 ft (71 m)	ASTM D5385 ²
Resistance to hydrostatic head, Functional details	231 ft (71 m)	231 ft (71 m)	ASTM D5385 ³
Tensile strength, film	4000 psi (27.6 Mpa)	4000 psi (27.6 Mpa)	ASTM D412

Tensile strength after soil burial, film	Retain >90%	Retain >90%	ASTM D412/ASTM D4068
Elongation	500%	500%	ASTM D412
Elongation after soil burial	Retain >90%	Retain >90%	ASTM D412/ASTM D4068
Low temperature flexibility	Unaffected at -20°F (-29°C)	Unaffected at -20°F (-29°C)	ASTM D1970
Crack cycling at -9.4°F (-23°C), 1/8" Movement	Unaffected, Pass	Unaffected, Pass	ASTM C1305/ASTM C836
Puncture resistance	225lbs (1000N)	100 lbs (445 N)	ASTM E154
Environmental stress resistance	Pass	Pass	ASTM D1693
Peel adhesion to concrete	10 lbs/in. (1750N/m)	10 lbs/in. (1750N/m)	ASTM D 903
Peel adhesion to concrete, After 3 years of water immersion	10 lbs/in. (1750N/m)	10 lbs/in. (1750N/m)	ASTM D 903 (After 3 years of water immersion)
Peel adhesion to concrete, After immersed in underground contaminants	Retain >80%	Retain >80%	ASTM D 543/ASTM D 903 ⁴
Lap peel adhesion	10 lbs/in. (1750N/m)	10 lbs/in. (1750N/m)	ASTM D1876 ⁵
Lap peel adhesion, After immersed in underground contaminants	Retain >80%	Retain >80%	ASTM D 543/ASTM D 1876 ⁶
Shear strength of joint	>100 lb	>60 lb	ASTM D882
VOC permeance	Not Detectable (Membrane, Seam)	Not Detectable (Membrane, Seam)	ASTM F 739 (Open loop)
Methane permeance ⁷	<40 ml/day.m ² .atm	74.5 ml/day.m ² .atm	ASTM D 1434
Methane permeance (before and after soil burial)	<40 ml/day.m ² .atm		ASTM D 4068/ASTM D 1434
Radon diffusion coefficient (membrane and seam), m ² /s	3.7 X 10 ⁻¹² Membrane, Seam	5.3 X 10 ⁻¹² Membrane, Seam	Method C of ISO/TS11665-1
Permeance to water vapor transmission	<0.01 perms (0.6 ng/(Pa x s x m ²))	<0.01 perms (0.6 ng/(Pa x s x m ²))	ASTM E96, method B

Footnotes:

1. Lateral water migration resistance is tested by casting concrete against membrane with a hole and subjecting the membrane to hydrostatic head pressure with water. The test measures the resistance of lateral water migration between the concrete and the membrane.
2. Hydrostatic head tests of PREPRUFE[®] Membranes are performed by casting concrete against the membrane with a lap.
3. Test is performed by casting concrete against the membrane with detail prepared per GCP standard details.
4. Sample immersed under TCE, PCE, BETX and acid & alkaline solution
5. The test is conducted 15 minutes after the lap is formed.
6. Sample immersed under TCE, PCE, BETX and acid & alkaline solution
7. PREPRUFE[®] 300R Plus/LT meets LARR requirement

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Last Updated: 2023-06-09

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PREPRUFE® Tape and PREPRUFE® CJ Tape Data Sheet

Product Description

PREPRUFE® Tape and PREPRUFE® CJ Tape are specially formulated two sided, reinforced pressure sensitive tapes. The bottom side of the tape has a highly aggressive pressure sensitive adhesive which is designed to adhere to penetrations, protrusions and GCP waterproofing membranes and accessories. The top side of the tape has a pressure sensitive adhesive, a weather resistant protective coating and a release liner. Concrete is cast directly against the protective white coating of the tape. The specially developed PREPRUFE® adhesive layers work together to form a continuous and integral seal to the structure.

PREPRUFE® Tape and PREPRUFE® CJ Tape are provided in Low Temperature and Hot Climate Grades as follows:

- PREPRUFE® Tape LT Grade and PREPRUFE® CJ Tape LT Grade - or temperatures between 25 °F (-4 °C) and 95 °F (+35 °C).
- PREPRUFE® Tape HC Grade and PREPRUFE® CJ Tape HC Grade - for use in Hot Climates (minimum 50 °F (10 °C)).

Use

PREPRUFE® Tape is a 4 in. (100 mm) wide tape used in detail areas including end laps, penetrations and various tie-ins. It is also used to patch damaged areas in the PREPRUFE® membranes.

PREPRUFE® CJ Tape is an 8 in. (200 mm) wide tape used at construction joints in the concrete that is cast against it or in critical areas where a wider tape is required.

Application

Wipe substrates to receive PREPRUFE® Tape and PREPRUFE® CJ Tape clean to remove any dirt, dust or moisture. Clean the surface of penetrations or protrusions with a wire brush to remove dirt, dust, rust and loose particles.

Unroll the tape and adhere the exposed pressure sensitive adhesive surface to the membrane or penetration. The protective coating surface of the tape should face toward the concrete to be cast onto the tape.

The use of rollers is required to maximize adhesion. Remove the release liner during application.

Ensure the plastic release liner is removed from all areas of PREPRUFE® Tape and PREPRUFE® CJ Tape. It is recommended that concrete be poured within 56 days (42 days in hot climates) of application of the PREPRUFE® system. Following proper ACI guidelines, concrete must be placed carefully and consolidated properly to avoid damage to the membrane. Never use a sharp object to consolidate the concrete. Provide temporary protection from concrete over splash for areas of the tape that are adjacent to a concrete pour.

DIMENSIONS (NOMINAL)	PREPRUFE® TAPE (HC OR LT)	PREPRUFE® CJ TAPE (HC OR LT)
Roll Size	4 in. x 49 ft. (100 mm x 15 m)	8 in. x 49 ft. (200 mm x 15 m)
Roll Weight	4.3 lbs (2 kg)	8.6 lbs (4 kg)

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Last Updated: 2022-12-06

[gcpat.com/solutions/products/preprufe-comprehensive-waterproofing-system/preprufe-tape-and-preprufe-cj-tape](https://www.gcpat.com/solutions/products/preprufe-comprehensive-waterproofing-system/preprufe-tape-and-preprufe-cj-tape)

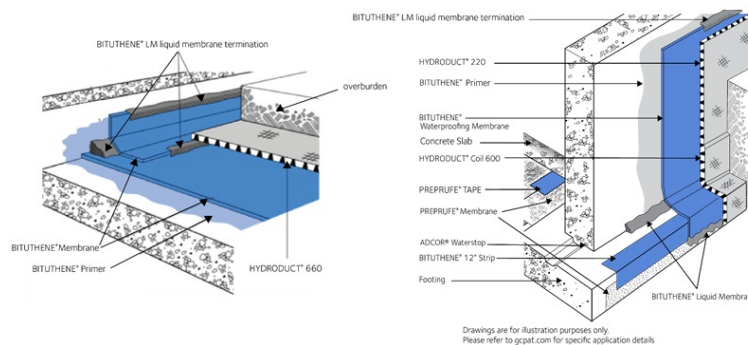
BITUTHENE® 4000 System Data Sheet

Membrane and Surface Conditioner System

Product Description

GCP Applied Technologies' ("GCP") BITUTHENE® 4000 system combines a robust, flexible, pre-formed membrane made of a high performance, cross laminated, HDPE carrier film with a tacky, self-adhesive rubberized asphalt compound and BITUTHENE® 4000 surface conditioner.

BITUTHENE® 4000 surface conditioner is water-based primer that is specifically formulated to promote adhesion by binding dust and concrete efflorescence to help provide a suitable surface for the BITUTHENE® 4000 waterproofing membrane. For convenience, BITUTHENE® 4000 surface conditioner is packaged inside each roll of BITUTHENE® 4000 membrane.



Product Advantages

- Provides a barrier to water, moisture and gas — physically isolating the structure from the surrounding substrate
- Excellent adhesion — Special adhesive compound engineered for use with BITUTHENE® 4000 surface conditioner
- Cross-laminated, high density polyethylene carrier film provides high tear strength, puncture and impact resistance
- Cold applied — Simple application to substrates, including low temperature applications
- Reduced inventory and handling costs due to the inclusion of primer in the packaging
- Wide application temperature range — Excellent bond at temperatures as low as 25 °F (-4 °C)
- Designed to accommodate a wide range of building configurations and details
- RIPCORDER® integrated filament — Split release on demand feature allows for ease of installation in detailed areas

System Components

Membrane

BITUTHENE® 4000 membrane – Self-adhered, rubberized asphalt waterproofing membrane

Ancillary components (Data sheets for all system components are available at gcpat.com.)

- BITUTHENE® 4000 surface conditioner – Water-based latex primer adhesive with added alcohol to allow application at low temperatures
- BITUTHENE® B2 LVC adhesive primer – Low VOC, solvent-based primer to increase adhesion of the BITUTHENE® 4000 membrane to concrete surfaces
- BITUTHENE® LM liquid membrane – Two-component, elastomeric, liquid-applied detailing compound
- BITUTHENE® mastic – Rubberized, asphalt-based mastic
- BITUTHENE® Edgeguard tape – Double-sided self-adhesive tape
- HYDRODUCT® drainage composite – High impact and creep-resistant geo-composite and protection layer
- BITUTHENE® Deck Prep surface treatment – Surface leveler for application to uneven or rough concrete surfaces

Limitations of Use

- The BITUTHENE® 4000 membrane and BITUTHENE® 4000 surface conditioner are specifically designed for use as detailed in this product data sheet, and are not intended for any other use. Contact GCP Technical Support if any other use is anticipated or intended.
- The BITUTHENE® 4000 membrane is designed for waterproofing surfaces where in-service temperatures will not exceed 130°F (54°C).
- Do not use BITUTHENE® mastic to terminate the BITUTHENE® 4000 membrane to PREPRUFE® pre-applied waterproofing systems. Terminations to PREPRUFE® membranes should only be done with BITUTHENE® LM liquid membrane.

Special note: When this information is printed from the gcpat.com global website, a footer appearing on this document may contain wording restricting its applicability to the United States. Note that the information and references in this document also apply to North, Central and South America.

Safety and Handling Information

Read and understand the product label and safety data sheet (SDS) for each system component. All users should acquaint themselves with this information prior to working with the products and follow the precautionary statements. SDSs can be obtained by contacting your local GCP representative or office, by calling GCP toll free at 1-866-333-3SBM (3726) and in some cases from our website at gcpat.com.

Storage

The BITUTHENE® 4000 membrane should be stored upright. Storage temperatures should not be below 25°F (-4°C) and should not exceed 90°F (32°C).

Installation

Technical Support, Details, and Technical Letters

The most up-to-date detail drawings and technical letters are available at gcpat.com. For complete application instructions, please refer to the current GCP Applied Technologies Contractor Handbook and Literature at www.gcpat.com. Documents in hardcopy as well as information found on websites other than www.gcpat.com may be out of date or in error. Before using this product, it is important that information be confirmed by accessing www.gcpat.com and reviewing the most recent product information, including and not limited to product data sheets and contractor manuals, technical bulletins, detail drawings and detailing recommendations. Please review all materials prior to installation of BITUTHENE® 4000 membranes. For technical assistance with detailing and problem solving, please call toll-free at (866) 333-3SBM (3726).

Temperature

- Apply BITUTHENE® 4000 membranes and BITUTHENE® surface conditioner only in dry weather and when air and surface temperatures are 25 °F (-4 °C) or above.
- BITUTHENE® B2 LVC adhesive primer and BITUTHENE® 4000 surface conditioner should only be applied in dry weather when the temperature is above 25 °F (-4 °C). See separate product information sheets and applicable application instructions.

Surface Preparation

Surfaces must be structurally sound and free of voids, spalled areas, loose aggregate and sharp protrusions. Remove contaminants such as grease, oil and wax from exposed surfaces. Remove dust, dirt, loose stone and debris. Concrete must be properly cured (minimum seven-days for normal weight structural concrete and 14 days for lightweight structural concrete). For horizontal applications, double the above cure times of concrete if placed over non-vented decks. Certain conditions, such as unusually wet weather or late removal of forms, may require longer dry times.

Dry weather application of BITUTHENE® 4000 membranes and BITUTHENE® 4000 surface conditioner is preferred. On vertical applications, if time is critical and damp conditions are unavoidable, BITUTHENE® B2 LVC adhesive primer may be used in place of BITUTHENE® surface conditioner. The use of BITUTHENE® B2 LVC adhesive primer may allow priming and installation of BITUTHENE® 4000 membranes on damp surfaces or green concrete. When using BITUTHENE® B2 LVC adhesive primer, priming may begin as soon as the concrete will maintain structural integrity.

Only use form release agents that will not transfer to the concrete. Remove forms as soon as possible from below horizontal slabs to prevent entrapment of excess moisture. Excess moisture may lead to blistering of the membrane.

Cure concrete with clear, resin-based curing compounds that do not contain oil, wax or pigment. See Technical Letter 5, Curing Compounds and Form Release Agents. Before application of BITUTHENE® surface conditioner and BITUTHENE® 4000 membranes, allow concrete to thoroughly dry following any rain (except with BITUTHENE® B2 LVC adhesive primer as noted above). Do not apply any products to frozen concrete.

Repair substrate defects such as spalled or poorly consolidated areas. Remove sharp protrusions and form match lines. For rough or uneven deck surfaces, use BITUTHENE® Deck Prep surface treatment as a repair and leveling agent. See BITUTHENE® Deck Prep surface treatment product information sheet for details. On masonry surfaces such as rough concrete block and brick walls, apply a parge and trowel cut mortar joints flush to the face of the concrete blocks and bricks.

Surface Conditioning

BITUTHENE® 4000 surface conditioner is ready to use, and can be applied by spray or roller. For best results, use a pump-type air sprayer with a fan tip nozzle. Apply BITUTHENE® 4000 surface conditioner to clean, dry, frost-free surfaces at a coverage rate of 300 ft²/gal (7.4 m²/L). Coverage should be uniform. The surface conditioner should not be applied so heavily that it puddles or runs. Do not apply conditioner directly to BITUTHENE® 4000 membranes. Allow BITUTHENE® 4000 surface conditioner to dry until the substrate returns to its original (dry) color. At low temperatures or in high humidity conditions, dry time may be extended to greater than one hour.

BITUTHENE® 4000 surface conditioner is clear when dry and may remain slightly tacky. In general, conditioning should be limited to what can be covered within 24-hours. In situations where long dry times may prevail, substrates may be conditioned up to 24-hours in advance. Substrates must be reconditioned if dirt or dust accumulates on the conditioned surface. Tools should be cleaned with water before the surface conditioner dries.

Application on Horizontal Surfaces

Note: PREPRUFE® 300R and 300R Plus pre-applied membranes are strongly recommended and are the preferred products for below slab applications or for any application where the membrane is applied before concrete is poured. See PREPRUFE® membrane waterproofing product information sheets at gcpat.com.

All horizontal surfaces to receive BITUTHENE® 4000 membranes should be sloped to drain at least 1/8 in./ft. (11 mm/m). When a minimum slope of 1/8 in. /ft. (11 mm/m) cannot be achieved, two layers of BITUTHENE® 4000 membranes or 80-mils of BITUTHENE® Deck Prep surface treatment and one layer of BITUTHENE® 4000 membranes maybe an option. Contact your local GCP representative for more details.

Apply the membranes from the low point to the high point so that laps shed water. Overlap all seams at least 2.5 in. (65 mm). Stagger all end laps. Roll the entire membrane firmly, and completely as soon as possible. Use a linoleum roller or standard water-filled garden roller less than 30 in. (760 mm) wide, weighing a minimum of 75 lbs (34 kg) when filled. Cover the face of the roller with a “conforming” material such as 1/2 in. (13 mm) plastic foam sheeting or two wraps of indoor-outdoor carpet to allow the membrane to fully contact the primed substrate. Seal all T-joints and membrane terminations with BITUTHENE® LM liquid membrane by the end of the day of membrane application.

Application on Vertical Surfaces

Apply BITUTHENE® 4000 membranes in lengths up to 8 ft (2.5 m). Overlap all seams at least 2.5 in. (65 mm). On walls higher than eight feet, apply membranes in two or more “shingled” lifts, with the upper sheet overlapping the lower by at least 2.5 in. (65 mm). Roll all membranes with a hand roller.

Terminate the membranes at grade level. Press each membrane firmly to the wall with the butt end of a hardwood tool such as a hammer handle or secure into a reglet. Failure to use heavy pressure at terminations can result in a poor seal.

All top-of-wall terminations should be sealed with BITUTHENE® LM liquid membrane or BITUTHENE® mastic. A termination bar may be used to ensure a tight seal. If the wall has been only partially covered by the end of the working day, apply a maximum ¼" bead of BITUTHENE® mastic tooled thin or BITUTHENE® LM liquid membrane along the exposed edges of the membrane at its temporary terminations to prevent vertical drainage of precipitation, which could undermine the membrane adhesion. Terminate the membranes at the base of the wall if the bottom of the interior floor slab is at least 6 in. (150 mm) above the footing.

Otherwise, use appropriate inside corner detail where the wall and footing meet. A 1/8 in. (3 mm) x 1 in. (25 mm) aluminum termination bar aligned with the top of the membrane is recommended for terminations on CMU, in earth covered decks and in earth-bermed applications where soil cannot be fully compacted. See technical letter 26 about BITUTHENE® membrane terminations for additional information.

Membrane Repairs

Patch tears and inadequately lapped seams with additional membrane. Clean any damaged membrane with a damp cloth and dry. Slit fish-mouths and repair with a patch extending 6 in. (150 mm) in all directions from the slit, and seal edges of the patch with BITUTHENE® LM liquid membrane. Inspect all membranes thoroughly before covering, and repair any damaged areas.

Drainage

HYDRODUCT® drainage composites are recommended for both active drainage and protection of the membranes. See HYDRODUCT® drainage composite product data sheet at gcpat.com.

Insulation

Always apply BITUTHENE® 4000 membranes directly to primed or conditioned structural substrates. Insulation, if used, must be applied over the membranes. Do not apply BITUTHENE® membranes over insulation or lightweight insulating concrete.

Flood Testing (Horizontal Surfaces Only)

Flood test all horizontal applications with a minimum 2 in. (51 mm) head of water for 24-hours. Mark any leaks and repair when the membrane is dry. Before flood testing, be sure the structure will withstand the dead load of the water. For highly sloped decks, segment the flood test to avoid excessively deep water near drains. Conduct the flood test 24-hours after completing the application of BITUTHENE® 4000 membranes. Immediately after flood testing is completed and all necessary repairs have been made, install HYDRODUCT® drainage composite to protect the BITUTHENE® membranes from damage by other trades.

As an alternate to flood testing, appropriate electronic leak detection may be used to check the integrity of the system.

Protection of Membrane

To prevent damage from other trades, construction materials or backfill, protect BITUTHENE® 4000 membranes immediately after application. To avoid potential blisters, place protection immediately where temperatures are above 77°F (25°C).

- On vertical applications, use HYDRODUCT® 220 drainage composite. Adhere HYDRODUCT® 220 Drainage Composite to membranes with PREPRUFE® Detail Tape. Alternative methods of protection are to use nominal 1.0 lb/ft³ (16kg/m³), min. 1 in. (25 mm) extruded polystyrene or min. 1/4 in. (6 mm) asphaltic hardboard. Such alternatives do not provide positive drainage to the system. If 1/4 in. (6 mm) extruded polystyrene protection board is used, backfill must not contain sharp rock or aggregate over 2 in. (50 mm) in diameter or any debris that might puncture the protection board and/or the membranes. See Technical 27 Letter Protection Courses used with GCP Waterproofing Systems for additional information.
- On horizontal applications, use HYDRODUCT® 660 Drainage Composite. Alternate methods of protection are to use 1 in (25 mm) extruded polystyrene or ¼" asphaltic hardboard.

Placing Steel

On horizontal applications when placing steel over properly protected membranes, use concrete bar supports (dobies) or chairs with plastic tips or rolled feet to prevent damage from sharp edges. Use special care when using wire mesh, especially if the mesh is curled.

Backfill

Place backfill as soon as possible. (See Protection of Membrane above) Use care during backfill operation to avoid damage to the waterproofing system. Follow generally accepted practices for backfilling and compaction. Backfill should be added and compacted in 6 in. (150 mm) to 12 in. (300 mm) lifts.

Approvals

- City of Los Angeles Research Report RR 24386 Miami-Dade County Code Report NOA 18-1109.01
- U.S. Department of Housing and Urban Development (HUD) HUD Materials Release 628j
- BITUTHENE® 4000 membranes carry a Underwriters' Laboratory Class A Fire Rating (Building Materials Directory (File TFGU.R7910) when used in either of the following constructions:
 1. Limited to noncombustible decks at inclines not exceeding 1/4 in. (6 mm) to the horizontal 1 ft (0.3 m). One layer of BITUTHENE® waterproofing membrane, followed by one-layer of 1/8 in. (3 mm) protection board, encased in 2 in. (50 mm) minimum concrete monolithic pour.
 2. Limited to noncombustible decks at inclines not exceeding 1/4 in. (6 mm) to the horizontal 1 ft (0.3 m). One layer of BITUTHENE® waterproofing membrane, followed by one layer of DOW styrofoam PD insulation board [2 in. (50 mm) thick]. This is covered with one layer of 2 ft x 2 ft x 2 in. (0.6 m x 0.6 m x 50 mm) of concrete paver topping.

Physical Properties for BITUTHENE® 4000 Membrane

PROPERTY	TYPICAL VALUE	TEST METHOD
Color	Dark gray-black	
Dimensions	3 ft x 66.7 ft roll (200 ft ²)	
Thickness	60 mils (1.5 mm) nominal	ASTM D3767—method A
Flexibility, 180° bend over 1 in. (25 mm) mandrel at -25°F (-32°C)	Unaffected	ASTM D1970

Tensile strength, Membrane, die C	325 psi (2240 kPa) minimum	ASTM D412 ¹
Tensile strength, film	5,000 psi (34.5 MPa) minimum	ASTM D882 ¹
Elongation, ultimate failure of rubberized asphalt	300% minimum	ASTM D412 ¹
Crack cycling at -25 °F (-32 °C), 100 cycles	Unaffected	ASTM C836
Lap shear	20 lbs (89 N)	ASTM D1002 ²
Peel strength	11 lbs/in. (1926 N/m)	ASTM D903 ⁴
Puncture resistance, Membrane	50 lbs (222 N) minimum	ASTM E154
Resistance to hydrostatic head	230 ft (70m) of water	ASTM D5385
Permeance	<0.1 perms	ASTM E96, section 12—water method
Water absorption	<0.1%	ASTM D570

Footnotes:

1. The test is run at a rate of 2 in. (50 mm) per minute.
2. The test is conducted at a speed of 4 in. (102 mm) per minute.
3. Individual Roll Length may vary +/- 1%
4. Test conducted with BITUTHENE® 4000 surface conditioner at minimum application temperature

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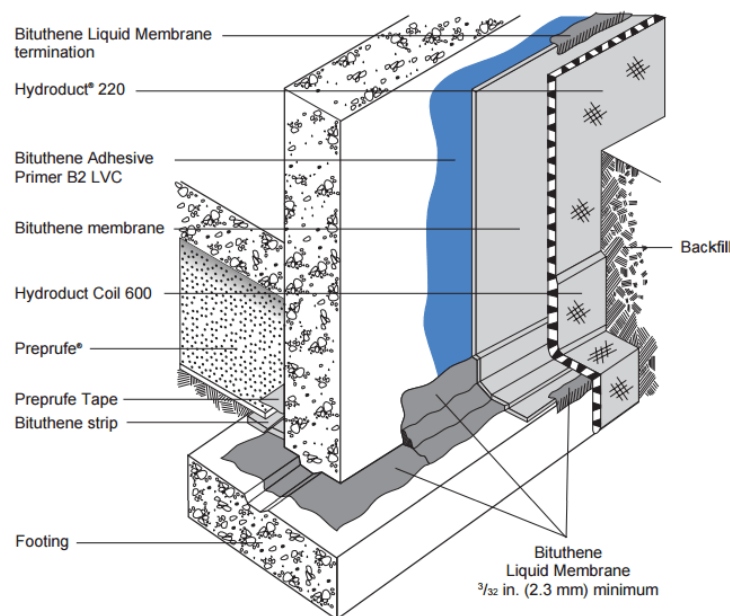
gcpat.com/solutions/products/bituthene-post-applied-waterproofing/bituthene-4000-membrane

BITUTHENE® Adhesive Primer B2 LVC Data Sheet

Specially formulated low VOC primer for use with GCP self-adhered membranes on green concrete or damp substrates

Product Description

BITUTHENE® Adhesive Primer B2 LVC is a low VOC primer in solvent specially formulated to provide good initial adhesion of GCP self-adhered membranes. In addition, its formulation promotes the adhesion of GCP self-adhered membranes to green concrete and damp surfaces. The VOC (Volatile Organic Compound) content is <200 g/L and is compliant with all state and local VOC requirements for adhesives and sealants. Architectural and industrial maintenance regulations limit the VOC content in products classified as adhesive primers. Refer to technical letters at gcpat.com for the most current list of allowable limits.



Use

BITUTHENE® Adhesive Primer B2 LVC is used to prime green concrete (less than seven day cure for normal structural concrete). It is also used to prime damp concrete, masonry, gypsum sheathing or wood surfaces on which GCP self-adhered membranes will be applied.

BITUTHENE® Adhesive Primer B2 LVC is used for vertical and horizontal applications at 25 °F (-4 °C) or above.

Application Procedures

Safety, Storage and Handling Information

GCP products must be handled properly. Vapors from solvent-based primers and mastic are harmful and flammable. For these products, the best available information on safe handling, storage, personal protection, health and environmental considerations has been gathered. SDS (Safety Data Sheet) are available at gcpat.com and users should acquaint themselves with this information. Carefully read detailed precaution statements on product labels and the SDS before use.

Supply

BITUTHENE® PRIMER B2 PROPERTY	VALUE
Unit Size	5 gal (18.9 L) pail
Weight	44 lbs (20 kg)/pail
Units per pallet	48 pails
Coverage	325–425 ft ² /gal (7.5–10.0 m ² /L)

BITUTHENE® Adhesive Primer B2 LVC is subject to a 18 months standard shelf life provided it is stored as per GCP recommendation.

Product Application

BITUTHENE® Adhesive Primer B2 LVC may be applied by roller or brush. Use a heavy nap roller made of natural material, such as lamb's wool.

Stir until a uniform color and consistency is achieved.

Apply it to clean, dirt free, frost-free surfaces at an approximate coverage rate of 325–425 ft²/gal (7.5–10.0 m²/L). Do not apply to frozen concrete or to areas with standing or visible water. Do not use during wet weather. Allow BITUTHENE® Adhesive Primer B2 LVC to dry one hour or until tack-free. Dry time may be longer in cold temperatures. Deep puddles of primer should be avoided as this will lengthen drying time. Rollers or brushes should be dipped into pans. Avoid pouring primer directly onto a horizontal substrate. Do not apply directly to GCP self-adhered membrane.

In general, priming should be limited to an area that can be covered with membrane within 24 hours. Areas that accumulate significant amounts of dust or dirt must be reprimed before membrane is applied.

Although it may be used on green concrete and damp surfaces, moisture may become trapped under the membrane. This may result in blistering, particularly on warm, sunny days. Therefore, cover the membrane as soon as possible to minimize blistering. If blistering occurs, allow membrane to cool and re-roll with heavy roller. Blisters over 4 in. (100 mm) in diameter should be cut and patched.

Clean tools with mineral spirits at the end of each day. Mineral spirits is a combustible liquid and should be used only in accordance with the manufacturer's safety recommendations. **Do not use solvents to clean hands or skin.**

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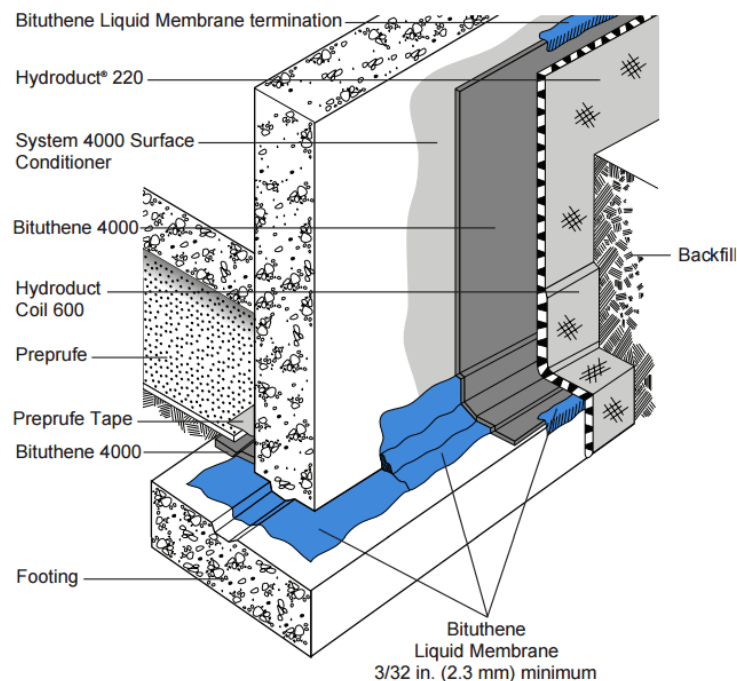
gcpat.com/solutions/products/bituthene-post-applied-waterproofing/bituthene-adhesive-primer-b2-lvc

BITUTHENE® Liquid Membrane Data Sheet

Two component, elastomeric, liquid applied detailing compound for use with GCP waterproofing membranes

Product Description

BITUTHENE® Liquid Membrane is a two component, elastomeric, cold applied, trowel grade material designed for a variety of uses with the GCP waterproofing systems. The VOC (Volatile Organic Compound) content is 10 g/L. Architectural and industrial maintenance regulations limit the VOC content in products classified as architectural coatings. Refer to Technical Letters for the most current list of allowable limits.



Product Advantages

- Liquid applied
- Waterproof
- Tough, rubber-like
- Chemically cured
- Cold applied
- System compatible

Use

BITUTHENE® Liquid Membrane is ideally suited for the following uses:

- Fillet material at inside corners
- Reinforcement material at inside corners
- Flashing material around drains, protrusions, curbs and parapets
- Sealing material at terminations
- Repair material for defects on concrete surfaces
- Flashing material at corners

The two parts of BITUTHENE® Liquid Membrane are mixed on site and troweled on to provide a simple and quick waterproofing detailing aid in conjunction with BITUTHENE®, PREPRUFE® and PROCOR® systems.

Compatibility

BITUTHENE® Liquid Membrane is completely compatible with BITUTHENE®, PREPRUFE® and PROCOR®, and with existing asphalt or coal tar-based waterproofing materials. It is also compatible with cured silicone and polyurethane sealants. It is not compatible with creosote, pentachlorophenol, linseed oil or polysulfide-based sealants.

Supply

BITUTHENE® Liquid Membrane (Parts A & B)		
Unit size	1.5 gal (5.7 L)	4 gal (15.1 L)
Net weight per unit	16 lbs (8 kg)	44 lbs (20 kg)
Units per pallet	100	24

Physical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Part A Color	Black	
Part B Color	Clear	
Mixture of Parts A and B Color	Black	
Solids content	100%	ASTM D1644
Elongation	250% minimum	ASTM D412
Peel strength	5 lbs/in. (880 N/m) minimum	ASTM D903
Flexibility, 180° bend over 1 in. (25 mm) mandrel at -25°F (-32°C)	Unaffected	ASTM D1970

Application Procedures

Safety, Storage and Handling Information

BITUTHENE® products must be handled properly. Vapors from solvent based primers and mastic are harmful and flammable. For these products, the best available information on safe handling, storage, personal protection, health and environmental considerations has been gathered. Safety Data Sheets (SDS) are available on the web site and users should acquaint themselves with this information. Carefully read detailed precaution statements on product labels and the SDS before use.

Surface Preparation

All surfaces must be dry and free from dirt, grease, oil, dust or other contaminants. BITUTHENE® Liquid Membrane may be applied at temperatures of 25°F (-4°C) or above. Store in a dry place above 40°F.

Mixing

Add the entire contents of the Part B container to Part A and mix for 3 to 5 minutes until uniform. Part A is black and Part B is clear. Take care to scrape material from the side and bottom of the containers to ensure thorough mixing. A low speed (150 rpm) mechanical mixer with flat paddle blades is required. Do not apply any material if streaks can be seen due to insufficient mixing. Once mixed, BITUTHENE® Liquid Membrane must be applied by trowel within 1.5 hours. More time is available at lower temperatures.

At high temperatures, thickening and curing will be faster. Material that has thickened must be discarded. The material will cure to a very flexible rubber-like material.

BITUTHENE® Liquid Membrane must be applied at a minimum thickness of $\frac{3}{16}$ in. (2.3 mm) unless otherwise noted on details. In fillet applications, the face of the fillet should be a minimum of $\frac{3}{4}$ in. (20 mm). In corner flashing application details, it should extend 6 in. (150 mm) in each direction from the corner. BITUTHENE® Liquid Membrane will adhere to primed or unprimed concrete.

BITUTHENE® Liquid Membrane should be allowed to cure at least 24 hours before flood testing.

Coverage

As a fillet material, 1 gal (3.8 L) will cover approximately 100 linear feet (30 m). As a flashing material, 1 gal (3.8 L) will cover approximately 17 f² (1.6 m²). As a fillet and reinforcement, 1 gal (3.8 L) will cover approximately 14 linear feet (4.3 m).

Cleaning

Clean tools and equipment with mineral spirits before BITUTHENE® Liquid Membrane has cured. Mineral spirits is a combustible liquid and should be used only in accordance with the manufacturer's safety recommendations. Do not use solvents to clean hands or skin.

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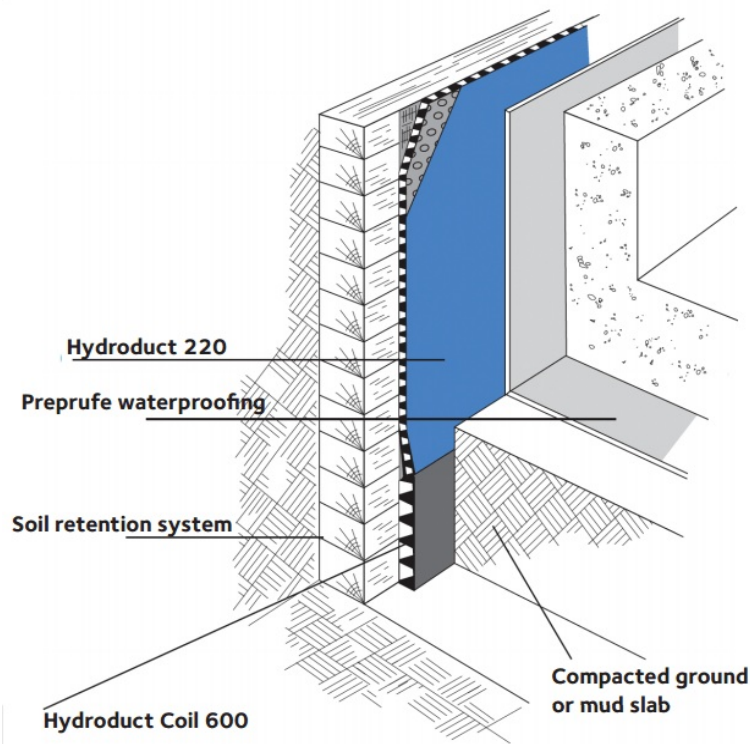
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HYDRODUCT® 220 Data Sheet

Drainage composite for use as a combined drainage and protection layer with GCP waterproofing membranes

Product Description

HYDRODUCT® 220 is a strong, preformed 0.44 in. (11 mm) thick geocomposite drainage sheet system, comprising a hollow studded polypropylene core, covered on one side with a nonwoven, needle punched polypropylene filter fabric and on the other side with a smooth polymeric film.



Uses

HYDRODUCT® 220 is designed primarily for use with waterproofing materials in vertical installations.

HYDRODUCT® 220 has been specially developed to provide a simple and highly practical collector and deflector of unwanted ground water on foundation walls, retaining walls, tunnels and planters. It can be used with PREPRUFE®, PROCOR®, or BITUTHENE® waterproof membranes. When installed it protects the membrane from damage and minimizes the build-up of percolated surface water against the structure. The construction of the studded sheet also creates an air void to isolate the structure from the effects of the surrounding ground.

HYDRODUCT® 220 has been designed to withstand ground pressures and the compaction forces of wet concrete to maintain a high water flow capacity. The drainage sheet must be connected into the site drainage system to minimize hydrostatic build-up and collect infiltrated water using HYDRODUCT® Coil 600 or traditional perforated pipes wrapped and linked with the geotextile filter fabric to prevent clogging.

Product Advantages

- Enhances waterproofing—eliminates hydrostatic pressure build-up
- Efficient water collector/deflector—can be used as a sandwich drainage layer between lagging and the reinforced concrete structure
- Smooth polymeric sheet—compatible with PREPRUFE[®], PROCOR[®], or BITUTHENE[®] membranes
- Convenient drainage and protection layer—serves as robust membrane protection and drainage
- Geotextile fabric filter—allows ground water to pass into the drain core while restricting the movement of soil particles
- High flow capacity
- Rot proof—unaffected by permanent immersion in water, bacteria, dilute acids and alkalis
- Economical—eliminates imported aggregate drainage layers
- Studded core—allows water to flow to designated drainage collection points

Application Procedures

Safety, Storage and Handling Information

All construction products must be handled properly. Safety Data Sheets (SDS) are available and users should acquaint themselves with this information. Carefully read detailed precaution statements on product labels and the SDS before use.

Installation

Position HYDRODUCT[®] so that the geotextile fabric filter is facing toward the groundwater, soil or overburden. The solid polymeric film provides extra protection for waterproofing such as PROCOR[®] or BITUTHENE[®] and should not be removed. In vertical applications, HYDRODUCT[®] 220 Drainage Composites can be applied to the substrate vertically but should extend from the perimeter discharge pipe to a point approximately 6 in. (150 mm) below the anticipated grade line.

When adhering HYDRODUCT[®] 220 directly to BITUTHENE[®] waterproofing membranes, PREPRUFE[®] Detail Tape should be used. When using PREPRUFE[®] Detail Tape, press firmly to ensure good adhesion.

Substrate and job site conditions will determine the attachment pattern. Additional consideration should be given in high wind exposures. Abut adjacent rolls with excess fabric overlapping in shingle fashion.

For inside and outside corners, abut adjoining drainage composite at the corner. Cover open core with extra geotextile filter fabric. The exposed core along the top terminations should be covered with a strip of geotextile to prevent intrusion of soil into core. At the bottom termination extend the HYDRODUCT[®] 220 Drainage Composite out from the structure so that it passes behind and under the perimeter discharge pipe. Additional geotextile should be wrapped over the pipe to prevent soil intrusion.

To secure HYDRODUCT[®] 220 around protrusions, apply PREPRUFE[®] Detail Tape around the protrusion in a picture frame configuration. Cut HYDRODUCT[®] 220 to fit snugly around the protrusion. Press the cut edge firmly into PREPRUFE[®] Detail Tape.

HYDRODUCT® 220 should be covered promptly. Do not leave HYDRODUCT® 220 exposed to sunlight for more than two weeks.

Motor vehicles, construction equipment or other trades should not be allowed directly on the HYDRODUCT® 220.

Supply

HYDRODUCT®

Roll size	4 ft x 50 ft (1.2 m x 15.2 m) 200 ft ² (18.6 m ²)
Packaging	6 rolls/pallet
Weight	39 lbs (17.7 kg)/roll
Complimentary Materials	
PREPRUFE® Detail Tape	2 in. x 50 ft (50 mm x 15 m) rolls

Physical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Drainage Core		
Thickness	0.40 in. (10 mm) nominal	ASTM D1777
Compressive strength	15,000 lbs/ft ² (718 kPa)	ASTM D6364
Flow rate (gradient 1.0.)	18 gal/min./ft (224 L/min./m)	ASTM D4716
Geotextile		
	Typical Value	Test Method
Tensile strength	100 lbs (445 N)	ASTM D4632
Apparent opening size	70 U.S. sieve (0.21 mm)	ASTM D4751
Flow rate	165 gal/min./ft ² (6724 L/min./m ²)	ASTM D4491
CBR puncture	275 lbs (1.23 kN)	ASTM D6241

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Last Updated: 2023-02-28

gcpat.com/solutions/products/hydroduct-drainage-composite/hydroduct-220

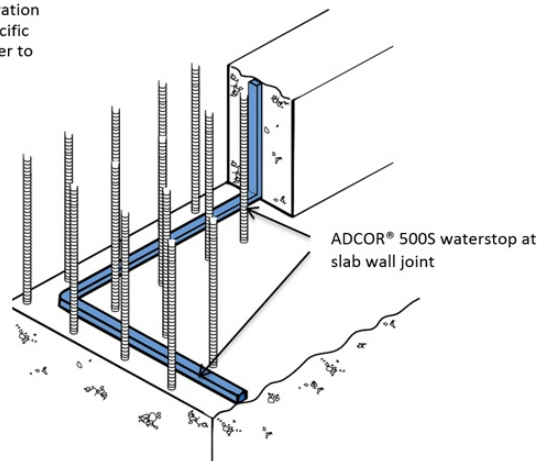
ADCOR® 500S Waterstop Data Sheet

Conformable, hydro-expansive waterstop for preventing water entry through joints in concrete sub-structures

Product Description

GCP Applied Technologies' ("GCP") ADCOR® 500S waterstop is a conformable, butyl rubber-based hydrophilic waterstop strip that expands in contact with water. When fully encapsulated by poured concrete, the expansive forces form a seal against concrete faces. This seal resists hydrostatic pressure, and is specifically engineered to stop water from entering sub-structures. The ADCOR® 500S waterstop is a unique product that has been specifically developed to provide superior performance compared to conventional bentonite and swellable rubber waterstops.

Drawings are for illustration purposes only. For specific application details, refer to gcpat.com.



Applications

- Construction joints in in-situ concrete structures
- Casting new concrete against existing
- Floor slabs cast against diaphragm retaining walls, steel sheet piles and secant piled walls
- Joints between floor slabs and pile caps
- Pipe penetrations through floors and walls

Product Advantages

- Controlled volumetric expansion reduces risk of concrete spalling
- Retains cohesive strength at both original and expanded volume
- Malleable and conformable, enabling easy application to a variety of concrete profiles and a variety of irregular substrates
- Resists at least 231 ft. (70m) hydrostatic pressure.
- Volumetric expansion min 100%

- Simple overlap jointing onsite.
- Reproducible swell after wet – dry cycling
- Unaffected by freeze/thaw cycling

System Components

Waterstop:

- ADCOR® 500S waterstop: a conformable, butyl rubber-based hydrophilic waterstop strip that expands in contact with water

Ancillary Components:

- ADCOR® 500S adhesive: One-component, caulk-applied adhesive required for attachment of the ADCOR® 500S waterstop

Limitations of Use

- Approved uses only include those uses specifically detailed in this Product Data Sheet and other current Product Data Sheets that can be found at gcpat.com.
- ADCOR® 500S waterstop is not intended for any other use. Contact GCP Technical Services where any other use is anticipated or intended.
- To be effective, waterstop networks (including ADCOR® 500S waterstop) must be continuous through all joints and penetrations.
- The ADCOR® 500S waterstop should not be used in movement joints.
- Not suitable for use with pre-cast concrete components.
- Not suitable for use without ADCOR® 500S adhesive. Mechanical fasteners should never be used as the only means of securement.
- Special Note: When this information is printed from the gcpat.com global website, a footer appearing on this document will restrict its applicability to the United States. Note that the information and references in this document are hereby expanded and apply to North, Central and South America.

Safety and Handling

Read and understand the product label and Safety Data Sheet (SDS) for each system component. All users should acquaint themselves with this information prior to working with the products and follow the precautionary statements.

SDSs can be obtained by contacting your local GCP representative or office, by calling GCP toll free at 1-866-333-3SBM (3726) and in some cases from our web site at gcpat.com.

Storage

- Observe one-year shelf life and use on a first in first out basis.
- Store in dry conditions between 40 °F (4.5 °C)–90 °F (32 °C).
- Store off ground under tarps or otherwise protected from rain, and all sources of moisture and frost.

Installation

Technical Support, Details and Technical Letters

The most up-to-date detail drawings and technical letters are available at gcpat.com. For complete application instructions, please refer to the current GCP Applied Technologies Contractor Handbook and Literature on www.gcpat.com. Documents in hardcopy as well as information found on websites other than www.gcpat.com may be out of date or in error. Before using this product, it is important that information be confirmed by accessing www.gcpat.com and reviewing the most recent product information, including without limitation Product Data Sheets, Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations.

Support is also available by full-time technically trained GCP Applied Technologies field sales representatives and technical service personnel, backed by a central research and development technical services staff. For technical assistance with detailing and problem solving, please call toll-free at (866) 333-3SBM (3726).

Temperature Requirements (application)

- The ADCOR[®] 500S waterstop can be applied at temperatures between 25 °F and 104 °F.

Substrate Preparation

Substrates must be clean and dry, free of all contaminants, such as oil, loose laitance and construction debris prior to the application of the ADCOR[®] 500S waterstop.

- Concrete surfaces must be sound, and free of large voids and honeycombs.
- Concrete surface must be free from ice, frost and standing water.

Horizontal and Vertical Installation

1. Apply a continuous minimum 3/8" (10 mm) bead of ADCOR[®] 500S adhesive directly to the concrete substrate, ensuring the minimum 3" (75mm) of concrete cover will be maintained. ADCOR[®] 500S adhesive can be applied to damp surfaces but should not be used where the substrate is wet or has standing or flowing water.
2. The ADCOR[®] 500S waterstop must be installed into the ADCOR[®] 500S adhesive within 30 minutes of the adhesive application.
3. Remove the release paper from the roll of ADCOR[®] 500S waterstop before firmly pressing the waterstop into the ADCOR[®] 500S adhesive. Ensure full and continuous contact between the ADCOR[®] 500S waterstop and the ADCOR[®] 500S adhesive and substrate.
4. For all shotcrete applications, mechanical fastening is required to ensure full contact remains between the ADCOR[®] 500S and the ADCOR[®] 500S adhesive to the substrate. For certain other conditions, such as overhead applications, very irregular substrates or temperatures below 40 °F, mechanical fastening may also be necessary.

5. When fastening is necessary, secure ADCOR® 500S to the ADCOR® 500S adhesive and substrate using masonry nails ½ –2 in. (40 mm– 50 mm) long with a washer ¾ in. (20 mm) in diameter. Powder actuated fasteners in similar length with a ¾ in. (20 mm) diameter washers may also be used. Fasteners should be spaced at a maximum of 12 in. (300 mm) on centers or as required to ensure continuous contact with the immediate substrate.
6. All joints should be overlapped side by side at a minimum of 4 in. (100mm). Ensure full contact between jointed pieces of the ADCOR® 500S waterstop.
7. The ADCOR® 500S waterstop can be bent around corners. Ensure that ADCOR® 500S adhesive fills any gaps between the ADCOR® 500S waterstop and the substrate.
8. Any damaged ADCOR® 500S waterstop must be removed and repaired with a new section of ADCOR® 500S waterstop following the above installation procedures
9. Keep the ADCOR® 500S waterstop dry prior to pouring concrete. Any sections showing evidence of premature swelling should be removed and replaced prior to concrete placement.
10. The ADCOR® 500S waterstop must be encapsulated by a minimum of 3 in. (75mm) of concrete cover.

Supply

PRODUCT	
ADCOR® 500S	3/4 in X 1 in X 16½ ft (5m) rolls 6 rolls/carton 30 cartons/pallet Pallet weight 1720 lbs.
ADCOR® 500S adhesive	13.5 oz. (400ml) sausage for caulking gun application

ADCOR® 500S Waterstop: Typical Values

PROPERTY	ADCOR® 500S WATERSTOP
Color	Light blue
Weight	0.5 lb/ft
Density	91 lb/ft³
Volumetric Expansion in Cement Water	100% min.
Hydrostatic Head Resistance	231 ft (70m)
Service Temperature Range	248°F max.
Application Temperature	25°F (-5°C) – 104°F (40°C)
Minimum Concrete Cover	3in.

Maximum Bend	180° at 32°F (0°C)
Minimum Overlap	4 in (100mm)

gcpat.com | North America Customer Service: 1-866-333-3726

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Last Updated: 2022-12-06

gcpat.com/solutions/products/adc-or-hydrophilic-waterstop/adc-or-500s-waterstop-data-sheet

INJECTO[®] Data Sheet

Groutable Hose Waterstop System

Product Description

INJECTO[®] is an injectable waterstop system that provides a conduit for the placement of GCP Applied Technologies chemical grouts. The ½" (12mm) permeable tube is installed before the concrete pour, but not injected until after the shrinkage associated with the curing concrete process is complete (typically a minimum 28-day cure). This allows the cracks to open fully before permanently sealing the interfaces and voids within construction joints, pipe penetrations, slurry walls and slab connections with chemical grout.



Figure 1. INJECTO[®] Kit

Product Advantages

- Fast, simple installation
- No special tools required
- Low pressure injection
- Permanent seal after injection
- Injectable any time after concrete cure

Applications

- Sealing cold and construction joints
- Sealing pipe penetrations and details
- Sealing joints between slurry walls and slabs

INJECTO[®] Tubes should only be used with GCP DE NEEF[®] INJECTO[®] PURE and DE NEEF[®] Flex Cat PURE chemical grouts. Please see different product data sheet and contact your local sales representative or technical services consultant for more details.

Packaging & Handling

INJECTO[®] is supplied in 100 ft. kits to allow the system to be cut to length on site. The maximum recommended cut length of INJECTO[®] Tube to be installed between packers is 25 ft. (see Figure 1).

Yellow INJECTO [®] Tube:	100 ft. (30 m)
Clear PVC Packer Tubing :	18 ft. (5.5 m)
Blue trumpets:	12 pieces
Anchoring clips:	100 pieces

1 Pallet = 40 x 100 ft. kits = 4000 ft. (1219 ft)

Unlimited shelf life when stored in a dry place.

Properties

TYPICAL PROPERTIES	
Outside Diameter	1/2 in. (12.5 mm)
Inside Diameter	5/16 in. (8 mm)
Length	Maximum 25 ft (7.6 m)
Weight	4.5 lbs (2 kg) per 25 ft (2 kg per 7.6 m)
Operating temperature	Up to 158°F (70°C)
Tensile strength steel wire	Approx. 261,000 psi (1800 N/mm ²)
Diameter filter pores	35 microns

Installation Guidelines

A high strength spiral wire coil (1) prevents collapse during concrete placement, while the non-woven filter membrane (2) prevents the tube from being clogged with concrete particles. A bright yellow reinforced mesh sleeve (3) protects the tube and allows for easy inspection before the pour. Wherever old to new concrete surfaces join, the INJECTO[®] system can be easily installed (see Figure 2).

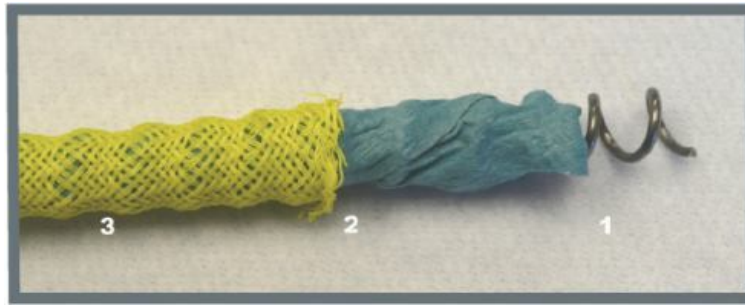


Figure 2. INJECTO® Tube Construction

The yellow INJECTO® Tube is installed onto the hardened concrete during formwork installation. In the case of rough surfaces, any gap between INJECTO® Tube and the surface should be filled with SWELLSEAL® WA or PREPRUFE® Hydrophilic Sealant.

The yellow INJECTO® Tube is cut to the required length on the job site (recommended length 25 ft. or less). The cut ends are smoothed with a twist; then the blue trumpets are installed over the yellow INJECTO® Tube and screwed down to the stop mark inside the trumpet (Figure 3).

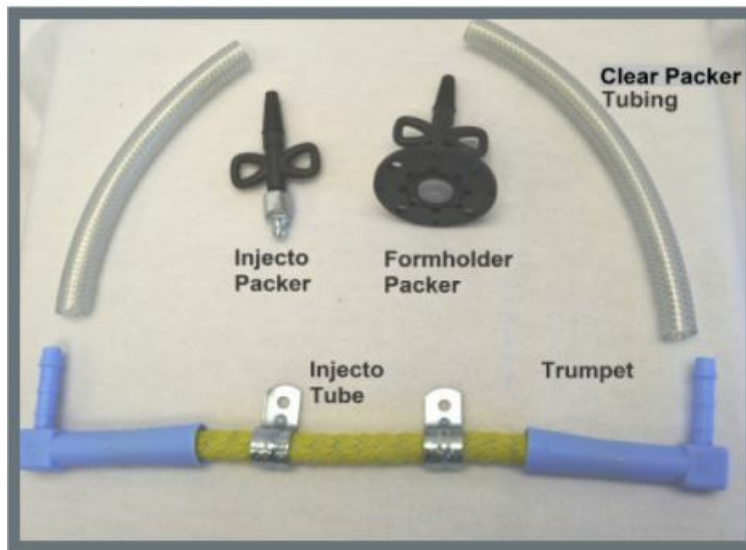


Figure 3. INJECTO® Tube shown with blue trumpets. INJECTO® Packer and Formholder Packer are not included in standard INJECTO® Tube “kit”

The yellow INJECTO® Tube is attached to the concrete with anchoring clips between the inner and outer reinforcing bars. Attach the anchoring clips to the concrete every 12 inches with concrete anchors or nails applied with a powder actuated system (see Figures 4, 5, 6 & 7).



Figure 4. Anchoring clips on INJECTO®

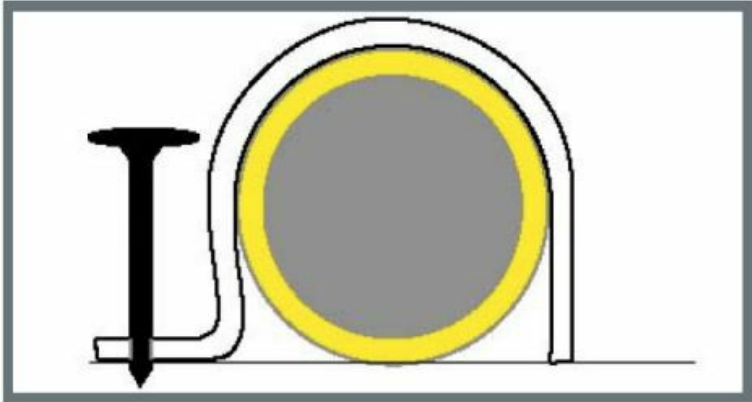


Figure 5. Nailing anchor clips

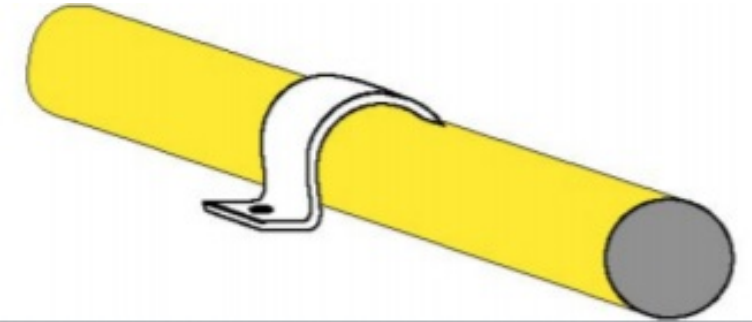


Figure 6. Placement of anchor clips

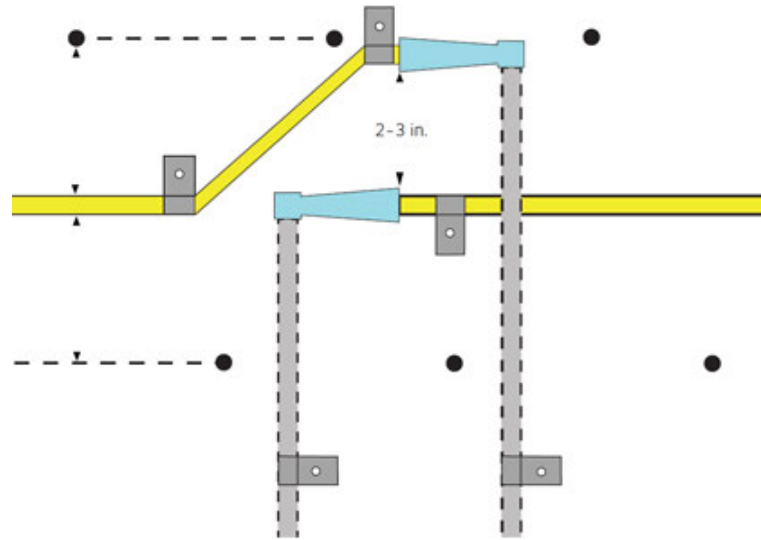


Figure 7. End and beginning of INJECTO® Tube lengths

The blue trumpets provide a connection between the yellow INJECTO® Tube and the clear packer tubing. Trumpets on adjacent runs should be installed with the wide ends of the trumpets (where the yellow INJECTO® Tube is attached) in line with each other and the two trumpets separated by 2-3 inches (see Figure 7). This will help avoid cross contamination of the yellow INJECTO® Tubes during the grouting operation.

Always terminate the yellow INJECTO® Tube into a trumpet and allow for a minimum of 2-1/2" of concrete cover. **Do not run the yellow INJECTO® Tube outside the formwork or outside of the concrete pour.**

Attach the clear packer tubing over the barbed end of the trumpets. Then cut the appropriate length of packer tubing as required to reach a formholder packer or to extend outside the formwork. The clear packer tubing should be secured to the rebar with tie wire to prevent movement during the pour.

The formholder packers can be either nailed to wooden formwork or attached to the rebar with steel tie wire if metal forms are used. If formholder packers are used, attach the clear packer tubing directly to them. If the clear packer tubing is being run outside the formwork, protect the open ends with a plastic cap or tape and take measures to protect them from damage during formwork, installation and stripping.

The INJECTO® System is ideal for unique and problem details such as pipe penetrations and attachment to conventional PVC waterstops that may encounter very high head pressures (see Figures 8 and 9).

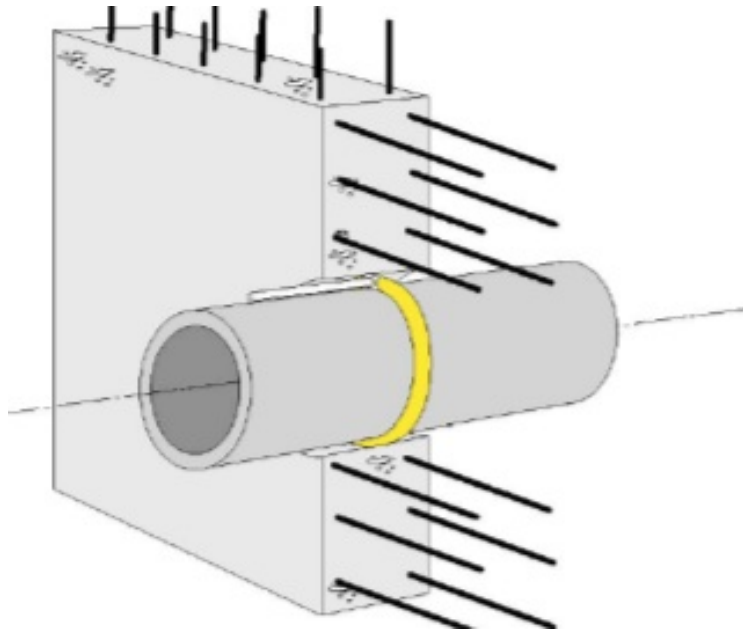


Figure 8. Pipe Sealing

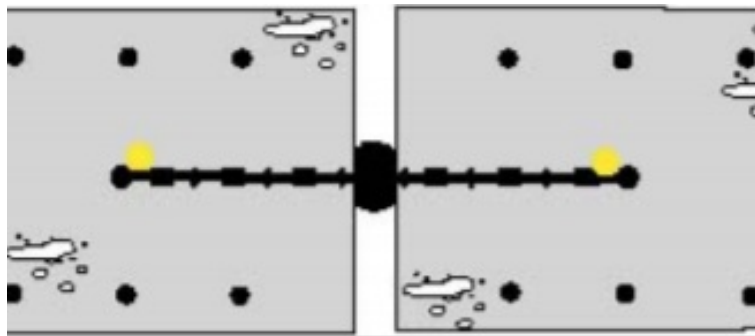


Figure 9. PVC Waterstop

CAUTIONS

- 1.** The yellow INJECTO[®] Tube must be installed in direct contact with the joint over its full length, to allow proper and complete distribution of the injection resin. If the concrete is not smooth enough to allow full contact, use SWELLSEAL[®] WA to create a smooth surface. Press the INJECTO[®] Tube into the SWELLSEAL[®] WA.
- 2.** Do not cross the yellow INJECTO[®] Tubes. Yellow should never touch yellow or cross contamination could occur during the grouting operation.
- 3.** Ends and beginnings of yellow INJECTO[®] Tube lengths should have trumpets spaced 2-3 inches apart (see Figures 4 and 8). This is to prevent cross-contamination during the resin injection process.
- 4.** Concrete coverage must be a minimum of 2 ½" on all sides. After concrete has cured for the recommended 28 days, any water infiltrating into the joint will be collected by the system and appear through the clear packer tubing. The tubing should either protrude out of the concrete at easily accessible places or be connected to a formholder packer.

The INJECTO[®] system is designed to provide a delivery system for GCP waterproofing resins, which are injected into the structure in accordance with the instructions found in the selected injection resins technical data sheets. Consult with GCP Technical Services for assistance in selecting the appropriate chemical grout for each condition.

Health and Safety

Read and understand the product label and Safety Data Sheet for each system component before use. All users should acquaint themselves with this information prior to working with the material. Carefully read detailed precaution statements on the product labels and SDS before use. SDS's can be obtained from our web site at gcpat.com or by contacting GCP toll free at 1-866-333-3SBM (3726).

Limitations

The INJECTO® waterstop system must be installed by an Approved GCP Applicator. In accordance with the INJECTO® Manual, Concrete cover must be a minimum of 2 ½" on all sides.

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GCP0083 WS-001-0617 INJECTO

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Last Updated: 2022-10-24

gcpat.com/solutions/products/waterstops/injecto-data-sheet

PREPRUFE® Tieback Cover Data Sheet

Product Description

The PREPRUFE® Tieback Cover is a specially designed, two-part cover used to maintain waterproofing integrity at soil retention tieback heads. The PREPRUFE® Tieback Cover consists of a base and cover, and is assembled on site to provide a simple and quick waterproofing detailing aid used with the PREPRUFE® system. A prefabricated, rigid ABS plastic base provides the strength and durability needed to withstand the pressure created by concrete placement. The prefabricated PREPRUFE® membrane cover ensures continuity of the advanced bond technology for the PREPRUFE® System.

Uses

The PREPRUFE® Tieback Cover can be installed over cable and rod type tieback heads. The base is mechanically fastened to the soil retention system and the cover is positioned over the base and integrated to the field membrane with PREPRUFE® Tape providing a continuous PREPRUFE® system for these difficult to detail areas.

Product Advantages

- Prevents water migration by forming a unique continuous adhesive bond to concrete
- Fully-adhered watertight laps using PREPRUFE® Tape
- Simple and quick to install
- Easy to inspect
- Unaffected by wet conditions
- Unaffected by freeze/thaw and wet/dry cycling
- Unique shape allows easier concrete consolidation

Installation

- Install PREPRUFE® Membrane within 2 in. (50 mm) of tieback as per standard installation instructions.
- Center the base over tieback and secure base to soil retention system using appropriate fasteners. Fasteners should have a low profile head.
- Apply PREPRUFE® Tape centered over the edge of the base flange and roll firmly to form a tight seal. Remove release liner and discard.
- Position the membrane cover over the base taking care to ensure the cover flange sits flat onto the PREPRUFE® Membrane.
- Apply PREPRUFE® Tape centered over the edge of the cover flange and roll firmly to form a tight seal. Remove release liner and discard.
- PREPRUFE® Tape should overlap onto surfaces of tape, membrane, base, cover, etc. a minimum of 2 in. (50 mm).

Physical Properties for ABS Base

PROPERTY	TYPICAL VALUE	TEST METHOD
Compression	7290 lbs/in ²	ASTM D695-02
Flexural strength	7910 lbs/in ²	ASTM D790-03
Flexural modulus	286000 lbs/in ²	ASTM D790-03
Impact strength = 72 °F, 50% RH	4.5 ft-lbs/in	ASTM D256—method A
(Notched izod) = -20 °F, 50% RH	2.3 ft-lbs/in	ASTM D256—method

PROPERTY	TYPICAL VALUE	TEST METHOD
Tensile, minimum	2000 lbs/in. ²	ASTM D412
Elongation, minimum	1,000%	ASTM D412
Puncture resistance, maximum	177 lbs	ASTM E154
Thickness, minimum	25 mil	ASTM D3767
Peel adhesion, minimum	5 lbs/in.-width	ASTM D903, modified*

* Concrete is cast against the protective coating surface of the membrane cover and allowed to properly cure (7 days minimum). Peel adhesion of membrane cover to concrete is measured at a rate of 2 in. (50 mm) per minute at room temperature.

PREPRUFE® TIEBACK COVER SUPPLY	
Sizes:	6 in. and 8 in.
Set:	1 ABS Base and 1 Membrane Cover (10 sets/carton)
Weight per carton:	30 lbs

Note: Remove release liner prior to installation.

PREPRUFE® Tieback Cover Dimensions

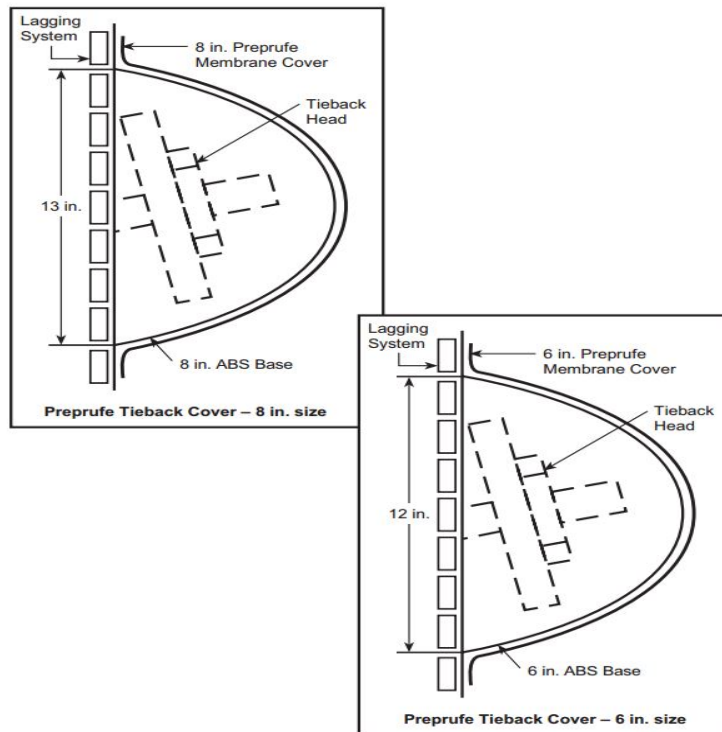
8 in. Size:

- Tieback anchor assembly maximum projection from face of wall is 8 in.
- To allow a 4 in. concrete cover, the minimum concrete wall thickness is 12 in.
- Tieback head plate maximum size of 8 in. x 8 in. x 2 in. for either cable or rod type anchors

6 in. Size:

- Tieback anchor assembly maximum projection from face of wall is 6 in.
- To allow a 4 in. concrete cover, the minimum concrete wall thickness is 10 in.
- Tieback head plate maximum size of 8 in. x 8 in. x 2 in. for either cable or rod type anchors

Contact your local GCP Representative for sizing information.



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Last Updated: 2022-12-07

gcpat.com/solutions/products/preprufe-comprehensive-waterproofing-system/preprufe-tieback-cover-data-sheet

Safety Data Sheet

Printing date 09/07/2018

Version Number 1.0

Reviewed on 09/07/2018

1 Identification

Product identifier

Trade name: *Preprufe 300R Plus*

SDS ID Number: 2337

Relevant identified uses of the substance or mixture, and uses advised against:

Waterproofing.
Specialty construction product. Not intended for other uses.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified, according to the Globally Harmonized System (GHS).

Additional information:

SDS's are not required for finished articles. nevertheless, the following information is provided to assist with safe use.

Label elements:

Hazard pictograms Not applicable.

Not applicable.

Hazard statements Not applicable.

NFPA ratings (scale 0 - 4)



Health = 0
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)

HEALTH	0	Health = 0
FIRE	0	Flammability = 0
REACTIVITY	0	Reactivity = 0

Other hazards Contact with residue from adhesive may cause eye and skin irritation.

Trade name: *Preprufe 300R Plus*

(Cont. from page 1)

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

* **3 Composition/information on ingredients**

Chemical characterization: Mixture

Hazardous components: Not applicable.

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

* **4 First-aid measures**

Description of first aid measures

General information: Get medical advice/attention if you feel unwell.

After inhalation: No special measures required.

After skin contact:

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

If skin irritation occurs, consult a doctor.

After eye contact:

Rinse cautiously with water for several minutes.

If symptoms persist, consult a physician.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

* **5 Fire-fighting measures**

Special hazards arising from the substance or mixture No further relevant information available.

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.

* **6 Accidental release measures**

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up: Pick up mechanically.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

USGHS

(Cont. on page 3)

Trade name: *Preprufe 300R Plus*

(Cont. from page 2)

7 Handling and storage

Handling:

Precautions for safe handling

Wash thoroughly after handling.

Avoid eye and skin contact with residue from adhesive.

Release liners are slippery. Remove from work area immediately after membrane application.

Membrane is slippery when wet or covered with frost.

Release liners may cause slip and trip hazards.

Do not eat, drink or smoke when using this product.

Wash skin after handling.

For professional use only. Keep out of children's reach.

Information about protection against explosions and fires:

Removal of release liner may generate a static electrical discharge (spark).

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Avoid contact with the eyes and skin.

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves

Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Rubber or other impervious gloves should be worn to prevent skin contact.

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Printing date 09/07/2018

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Trade name: *Preprufe 300R Plus*

(Cont. from page 3)

Eye protection:

Safety glasses with side shield protection.

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information**Appearance:**

Form:	Solid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not applicable.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.

Flammability (solid, gaseous): Not determined.

Ignition temperature: Undetermined.

Decomposition temperature: Not determined.

Auto igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.
VOC Content (max):	Not determined.

Vapor pressure:	Not applicable.
Density: (~) at 20 °C (68 °F)	1 g/cm ³ (8.3 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.

Solubility in / Miscibility with Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.
Molecular weight	Not applicable.

Other information No further relevant information available.

10 Stability and reactivity

Reactivity Stable under normal conditions.

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USGHS

Trade name: *Preprufe 300R Plus*

(Cont. from page 4)

Chemical stability**Thermal decomposition:** No decomposition if used according to specifications.**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

Information on toxicological effects**Acute toxicity:****Primary irritant effect:****on the skin:** No irritating effect expected**on the eye:** No irritating effect expected**inhalation:** No irritating effect expected**Additional toxicological information:****Carcinogenic categories**

IARC (International Agency for Research on Cancer) Human Carcinogenicity:
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

None of the ingredients are listed.

NTP (National Toxicology Program)**K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information

Toxicity**Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not known to be hazardous to water.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

USGHS

(Cont. on page 6)

Safety Data Sheet

Printing date 09/07/2018

Version Number 1.0

Reviewed on 09/07/2018

Trade name: *Preprufe 300R Plus*

(Cont. from page 5)

13 Disposal considerations**Disposal methods:**

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

14 Transport information**UN-Number**

DOT, IMDG, IATA

Not applicable.

UN proper shipping name

DOT, IMDG, IATA

Not applicable.

Transport hazard class(es)

DOT, IMDG, IATA

Class

Not applicable.

Packing group

DOT, IMDG, IATA

Not applicable.

Environmental hazards:

Marine pollutant:

No

Special precautions for user

Not applicable.

Transport/Additional information: Not classified as a dangerous good for transport by road, rail or air.

DOT

Remarks:

Not Regulated.

15 Regulatory information**SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: None

North America Chemical Inventory Status**TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

Right to Know Ingredient Disclosure:

Non Hazardous / Non Regulated Components

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Reviewed on 09/07/2018

Trade name: *Preprufe 300R Plus*

(Cont. from page 6)

Non-hazardous ingredients

California Proposition 65: (Substances <0.1% unless noted in Section 3)**Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenicity Categories**TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)****Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

None of the ingredients are listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.

If no g/L value is provided this product is not subject to above standard.

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:

GCP Applied Technologies

62 Whittemore Avenue

Cambridge, MA 02140 USA

USA: +1-617-876-1400 (24 hours)

+1-800-354-5414

Date of preparation / last revision 09/07/2018 / -**The first date of preparation** 09/07/2018**Number of revision times and the latest revision date** 1.0 / 09/07/2018

USGHS

Safety Data Sheet

Printing date 01/25/2018

Version Number 1.0

Reviewed on 01/25/2018

1 Identification

Product identifier

Trade name: *Preprufe® 160R Plus*

SDS ID Number: 2718

Relevant identified uses of the substance or mixture, and uses advised against:

Waterproofing.
Specialty construction product. Not intended for other uses.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

Additional information:

SDS's are not required for finished articles. nevertheless, the following information is provided to assist with safe use.

Label elements:

Hazard pictograms Not applicable.

Not applicable.

Hazard statements Not applicable.

NFPA ratings (scale 0 - 4)



Health = 1
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)



HEALTH 1 Health = 1
FIRE 1 Flammability = 1
REACTIVITY 0 Reactivity = 0

Other hazards Contact with residue from adhesive may cause eye and skin irritation.

Results of PBT and vPvB assessment

PBT: Not applicable.

Trade name: Preprufe® 160R Plus

(Cont. from page 1)

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixture

Hazardous components: Not applicable.

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

4 First-aid measures

Description of first aid measures

General information: Get medical advice/attention if you feel unwell.

After inhalation: No special measures required.

After skin contact:

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

If skin irritation occurs, consult a doctor.

After eye contact:

Rinse cautiously with water for several minutes.

If symptoms persist, consult a physician.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Special hazards arising from the substance or mixture No further relevant information available.

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up: Pick up mechanically.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

USGHS

(Cont. on page 3)

Trade name: **Preprufe® 160R Plus**

(Cont. from page 2)

7 Handling and storage

Handling:

Precautions for safe handling

Wash thoroughly after handling.

Avoid eye and skin contact with residue from adhesive.

Release liners are slippery. Remove from work area immediately after membrane application.

Membrane is slippery when wet or covered with frost.

Release liners may cause slip and trip hazards.

Do not eat, drink or smoke when using this product.

Wash skin after handling.

For professional use only. Keep out of children's reach.

Information about protection against explosions and fires:

Removal of release liner may generate a static electrical discharge (spark).

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Avoid contact with the eyes and skin.

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Eye protection:



Safety glasses with side shield protection.

(Cont. on page 4)

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Safety Data Sheet

Printing date 01/25/2018

Version Number 1.0

Reviewed on 01/25/2018

Trade name: *Preprufe® 160R Plus*

(Cont. from page 3)

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties**Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Solid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not applicable.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.

Flammability (solid, gaseous): Not determined.

Ignition temperature: Undetermined.

Decomposition temperature: Not determined.

Auto igniting: Product is not self-igniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.
VOC Content (max):	Not determined.

Vapor pressure:	Not applicable.
Density: (~) at 20 °C (68 °F)	1 g/cm ³ (8.3 lbs/gal)
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.

Solubility in / Miscibility with Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.
Molecular weight	Not applicable.

Other information No further relevant information available.

10 Stability and reactivity

Reactivity Stable under normal conditions.

Chemical stability

Thermal decomposition: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

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Safety Data Sheet

Printing date 01/25/2018

Version Number 1.0

Reviewed on 01/25/2018

Trade name: *Preprufe® 160R Plus*

(Cont. from page 4)

Incompatible materials: No further relevant information available.**Hazardous decomposition products:** Carbon monoxide and carbon dioxide**11 Toxicological information****Information on toxicological effects****Acute toxicity:****Primary irritant effect:****on the skin:** No irritating effect expected**on the eye:** No irritating effect expected**inhalation:** No irritating effect expected**Additional toxicological information:****Carcinogenic categories****IARC (International Agency for Research on Cancer) Human Carcinogenicity:**
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

None of the ingredients is listed.

NTP (National Toxicology Program)**K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not known to be hazardous to water.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.**13 Disposal considerations****Disposal methods:**

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

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Safety Data Sheet

Printing date 01/25/2018

Version Number 1.0

Reviewed on 01/25/2018

Trade name: *Preprufe® 160R Plus*

(Cont. from page 5)

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

* **14 Transport information****UN-Number**

DOT, IMDG, IATA Not applicable.

UN proper shipping name

DOT, IMDG, IATA Not applicable.

Transport hazard class(es)

DOT, IMDG, IATA
Class Not applicable.

Packing group

DOT, IMDG, IATA Not applicable.

Environmental hazards:

Marine pollutant: No

Special precautions for user

Not applicable.

Transport/Additional information: Not classified as a dangerous good for transport by road, rail or air.

DOT

Remarks: Not Regulated.

UN "Model Regulation":

Not applicable.

* **15 Regulatory information****SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: None

North America Chemical Inventory Status**TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

California Proposition 65: (Substances <0.1% unless noted in Section 3)**Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

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Safety Data Sheet

Printing date 01/25/2018

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Reviewed on 01/25/2018

Trade name: **Preprufe® 160R Plus**

(Cont. from page 6)

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenicity Categories**TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)****Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

None of the ingredients is listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.

If no g/L value is provided this product is not subject to above standard.

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:

GCP Applied Technologies

62 Whittemore Avenue

Cambridge, MA 02140 USA

USA: +1-617-876-1400 (24 hours)

+1-800-354-5414

Date of preparation / last revision 01/25/2018 / -**The first date of preparation** 09/19/2016**Number of revision times and the latest revision date** 1.0 / 01/25/2018

USGHS

Safety Data Sheet

Printing date 08/22/2019

Version Number 1.0

Reviewed on 08/22/2019

1 Identification

Product identifier

Trade name: ***PREPRUFE® Tapes (All Products)***

SDS ID Number: 153

Relevant identified uses of the substance or mixture, and uses advised against:

Waterproofing.
Specialty construction product. Not intended for other uses.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified, according to the Globally Harmonized System (GHS).

Additional information:

SDS's are not required for finished articles. nevertheless, the following information is provided to assist with safe use.

Label elements:

Hazard pictograms Not applicable.

Not applicable.

Hazard statements Not applicable.

NFPA ratings (scale 0 - 4)



Health = 0
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 0
Flammability = 1
Reactivity = 0

Other hazards Contact with residue from adhesive may cause eye and skin irritation.

Safety Data Sheet

Printing date 08/22/2019

Version Number 1.0

Reviewed on 08/22/2019

Trade name: **PREPRUFE® Tapes (All Products)**

(Cont. from page 1)

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients**Chemical characterization: Mixture****Hazardous components:** Not applicable.**Additional information:** Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.**4 First-aid measures****Description of first aid measures****General information:** Get medical advice/attention if you feel unwell.**After inhalation:** No special measures required.**After skin contact:** If skin irritation occurs, consult a doctor.**After eye contact:**

Rinse cautiously with water for several minutes.
 If symptoms persist, consult a physician.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:**Most important symptoms and effects, both acute and delayed** No further relevant information available.**Indication of any immediate medical attention and special treatment needed** No further relevant information available.**5 Fire-fighting measures****Special hazards arising from the substance or mixture** No further relevant information available.**Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.**6 Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up: Pick up mechanically.**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

USGHS

(Cont. on page 3)

Trade name: **PREPRUFE® Tapes (All Products)**

(Cont. from page 2)

7 Handling and storage

Handling:

Precautions for safe handling

Wash thoroughly after handling.

Avoid eye and skin contact with residue from adhesive.

Release liners are slippery. Remove from work area immediately after membrane application.

Membrane is slippery when wet or covered with frost.

Release liners may cause slip and trip hazards.

Do not eat, drink or smoke when using this product.

Wash skin after handling.

For professional use only. Keep out of children's reach.

Information about protection against explosions and fires:

Removal of release liner may generate a static electrical discharge (spark).

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Avoid contact with the eyes and skin.

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Rubber or other impervious gloves should be worn to prevent skin contact.

Eye protection:



Safety glasses with side shield protection.

(Cont. on page 4)

USGHS

Safety Data Sheet

Printing date 08/22/2019

Version Number 1.0

Reviewed on 08/22/2019

Trade name: **PREPRUFE® Tapes (All Products)**

(Cont. from page 3)

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties**Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Solid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not applicable.**Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.

Flammability (solid, gaseous): Not determined.**Ignition temperature:** Undetermined.**Decomposition temperature:** Not determined.**Auto igniting:** Not determined.**Danger of explosion:** Product does not present an explosion hazard.**Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.
VOC Content (max):	Not determined.

Vapor pressure: Not applicable.**Density: (~) at 20 °C (68 °F)** 1 g/cm³ (8.3 lbs/gal)**Relative density** Not determined.**Vapor density** Not determined.**Solubility in / Miscibility with****Water:** Not miscible or difficult to mix.**Partition coefficient (n-octanol/water):** Not determined.**Viscosity:****Dynamic:** Not applicable.**Kinematic:** Not applicable.**Molecular weight** Not applicable.**Other information**

No further relevant information available.

10 Stability and reactivity**Reactivity**

Stable under normal conditions.

No further relevant information available.

Chemical stability**Thermal decomposition:** No decomposition if used according to specifications.

(Cont. on page 5)

USGHS

Safety Data Sheet

Printing date 08/22/2019

Version Number 1.0

Reviewed on 08/22/2019

Trade name: **PREPRUFE® Tapes (All Products)**

(Cont. from page 4)

Possibility of hazardous reactions

No dangerous reactions known.
No further relevant information available.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information**Information on toxicological effects**

Acute toxicity:

Primary irritant effect:

on the skin: No irritating effect expected

on the eye: No irritating effect expected

inhalation: No irritating effect expected

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer) Human Carcinogenicity:
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

None of the ingredients are listed.

NTP (National Toxicology Program)

K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information**Toxicity**

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

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(Cont. on page 6)

Safety Data Sheet

Printing date 08/22/2019

Version Number 1.0

Reviewed on 08/22/2019

Trade name: **PREPRUFE® Tapes (All Products)**

(Cont. from page 5)

13 Disposal considerations**Disposal methods:**

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

14 Transport information**UN-Number**

DOT, IMDG, IATA

Not applicable.

UN proper shipping name

DOT, IMDG, IATA

Not applicable.

Transport hazard class(es)

DOT, IMDG, IATA

Class

Not applicable.

Packing group

DOT, IMDG, IATA

Not applicable.

Environmental hazards:

Marine pollutant:

No

Special precautions for user

Not applicable.

Transport/Additional information: Not classified as a dangerous good for transport by road, rail or air.

DOT

Remarks:

Not Regulated.

UN "Model Regulation":

Not applicable.

15 Regulatory information**SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: None

North America Chemical Inventory Status**TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

(Cont. on page 7)

USGHS

Safety Data Sheet

Printing date 08/22/2019

Version Number 1.0

Reviewed on 08/22/2019

Trade name: **PREPRUFE® Tapes (All Products)**

(Cont. from page 6)

Right to Know Ingredient Disclosure:

Non-hazardous ingredients

California Proposition 65: (Substances <0.1% unless noted in Section 3)**Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenicity Categories**TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)****Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

None of the ingredients are listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.

If no g/L value is provided this product is not subject to above standard.

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414

Other Information:

This SDS is for the following products: PREPRUFE® Detail Tape, PREPRUFE® Tape LT, PREPRUFE® Tape HC, PREPRUFE® CJ Tape LT, & PREPRUFE® CJ Tape HC.

The first date of preparation 03/15/2019

Number of revision times and the latest revision date 1.0 / 08/22/2019

USGHS

Safety Data Sheet

Printing date 09/01/2017

Version Number 1.0

Reviewed on 09/01/2017

1 Identification

Product identifier

Trade name: *Bituthene System 4000 WP Membrane*

SDS ID Number: 2754

Relevant identified uses of the substance or mixture, and uses advised against:

Waterproofing.
Specialty construction product. Not intended for other uses.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

Additional information:

SDS's are not required for finished articles. nevertheless, the following information is provided to assist with safe use.

Label elements:

Hazard pictograms Not applicable.

Not applicable.

Hazard statements Not applicable.

NFPA ratings (scale 0 - 4)



Health = 1
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 1
Flammability = 0
Reactivity = 0

Other hazards Contact with residue from adhesive may cause eye and skin irritation.

Results of PBT and vPvB assessment

PBT: Not applicable.

Trade name: *Bituthene System 4000 WP Membrane*

(Cont. from page 1)

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixture

Hazardous components: Not applicable.

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

4 First-aid measures

Description of first aid measures

General information: Get medical advice/attention if you feel unwell.

After inhalation: No special measures required.

After skin contact:

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

If skin irritation occurs, consult a doctor.

After eye contact:

Rinse cautiously with water for several minutes.

If symptoms persist, consult a physician.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Special hazards arising from the substance or mixture No further relevant information available.

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up: Pick up mechanically.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Trade name: *Bituthene System 4000 WP Membrane*

(Cont. from page 2)

7 Handling and storage

Handling:

Precautions for safe handling

Wash thoroughly after handling.

Avoid eye and skin contact with residue from adhesive.

Release liners are slippery. Remove from work area immediately after membrane application.

Membrane is slippery when wet or covered with frost.

Release liners may cause slip and trip hazards.

Do not eat, drink or smoke when using this product.

Wash skin after handling.

For professional use only. Keep out of children's reach.

Information about protection against explosions and fires:

Removal of release liner may generate a static electrical discharge (spark).

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Avoid contact with the eyes and skin.

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Eye protection:



Safety glasses with side shield protection.

(Cont. on page 4)

USGHS

Safety Data Sheet

Printing date 09/01/2017

Version Number 1.0

Reviewed on 09/01/2017

Trade name: *Bituthene System 4000 WP Membrane*

(Cont. from page 3)

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties**Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Solid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not applicable.**Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.

Flammability (solid, gaseous): Not determined.**Ignition temperature:** Undetermined.**Decomposition temperature:** Not determined.**Auto igniting:** Product is not self-igniting.**Danger of explosion:** Product does not present an explosion hazard.**Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.
VOC Content (max):	Not determined.

Vapor pressure:	Not applicable.
Density: (~) at 20°C (68 °F)	1g/cm ³ (8.3 lbs/gal)
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.

Solubility in / Miscibility with Water: Not miscible or difficult to mix.**Partition coefficient (n-octanol/water):** Not determined.**Viscosity:**

Dynamic:	Not applicable.
Kinematic:	Not applicable.
Molecular weight	Not applicable.

Other information No further relevant information available.**10 Stability and reactivity****Reactivity** Stable under normal conditions.**Chemical stability****Thermal decomposition:** No decomposition if used according to specifications.**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.

(Cont. on page 5)

USGHS

Safety Data Sheet

Printing date 09/01/2017

Version Number 1.0

Reviewed on 09/01/2017

Trade name: *Bituthene System 4000 WP Membrane*

(Cont. from page 4)

Incompatible materials: No further relevant information available.**Hazardous decomposition products:** Carbon monoxide and carbon dioxide**11 Toxicological information****Information on toxicological effects****Acute toxicity:****Primary irritant effect:****on the skin:** No irritating effect expected**on the eye:** No irritating effect expected**inhalation:** No irritating effect expected**Additional toxicological information:****Carcinogenic categories****IARC (International Agency for Research on Cancer) Human Carcinogenicity:**
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

None of the ingredients is listed.

NTP (National Toxicology Program)**K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not known to be hazardous to water.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.**13 Disposal considerations****Disposal methods:**

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

(Cont. on page 6)

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Safety Data Sheet

Printing date 09/01/2017

Version Number 1.0

Reviewed on 09/01/2017

Trade name: *Bituthene System 4000 WP Membrane*

(Cont. from page 5)

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

* **14 Transport information****UN-Number**

DOT, IMDG, IATA Not applicable.

UN proper shipping name

DOT, IMDG, IATA Not applicable.

Transport hazard class(es)

DOT, IMDG, IATA Class Not applicable.

Packing group

DOT, IMDG, IATA Not applicable.

Environmental hazards:

Marine pollutant: No

Special precautions for user

Not applicable.

Transport/Additional information: Not classified as a dangerous good for transport by road, rail or air.

DOT

Remarks: Not Regulated.

UN "Model Regulation":

Not applicable.

* **15 Regulatory information****SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: None

North America Chemical Inventory Status**TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

California Proposition 65: (Substances <0.1% unless noted in Section 3)**Chemicals known to cause cancer:**

Extracts (petroleum), heavy paraffinic distillate solvent

Polycyclic Aromatic Hydrocarbons

(Cont. on page 7)

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Safety Data Sheet

Printing date 09/01/2017

Version Number 1.0

Reviewed on 09/01/2017

Trade name: *Bituthene System 4000 WP Membrane*

(Cont. from page 6)

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenicity Categories**TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)****Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

None of the ingredients is listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.

If no g/L value is provided this product is not subject to above standard.

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:

GCP Applied Technologies

62 Whittemore Avenue

Cambridge, MA 02140 USA

USA: +1-617-876-1400 (24 hours)

+1-800-354-5414

Date of preparation / last revision 09/01/2017 / -**The first date of preparation** 12/02/2016**Number of revision times and the latest revision date** 1.0 / 09/01/2017

USGHS

1 Identification

Product identifier

Trade name: *Bituthene Adhesive Primer B2 LVC*

SDS ID Number: 60028

Relevant identified uses of the substance or mixture, and uses advised against:
Specialty construction product. Not intended for other uses.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

Flammable liquid and vapor.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure. May cause damage to the central nervous system through prolonged or repeated exposure.

Label elements:

Hazard pictograms



GHS02 GHS07 GHS08

Danger

Hazard statements

Flammable liquid and vapor.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure. May cause damage to the central nervous system through prolonged or repeated exposure.

Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 1)

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Take precautionary measures against static discharge.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF exposed or concerned: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 If skin irritation occurs: Get medical advice/attention.
 Store in a well-ventilated place. Keep cool.

Hazard description: Flammable

NFPA ratings (scale 0 - 4)



Health = 2
 Fire = 3
 Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = *3
 Flammability = 3
 Reactivity = 0

Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients**Chemical characterization: Mixture**

Description: Mixture of the hazardous substance(s) listed below with additional nonhazardous ingredients.

Hazardous components:

68478-07-9	Hydrocarbon Resin	30-50%
95-47-6	Xylene (o)	10-20%
8052-41-3	Stoddard solvent	2.0-5.0%
63449-39-8	Paraffin waxes and hydrocarbon waxes	1.0-2.0%
8052-42-4	Asphalt	1.0-2.0%
100-41-4	Ethylbenzene	0.1-1.0%

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

4 First-aid measures**Description of first aid measures****General information:** Get medical advice/attention if you feel unwell.**After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact:

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

After eye contact: Rinse cautiously with water for several minutes.

(Cont. on page 3)

USGHS

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 2)

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: CO₂, sand,extinguishing powder. Do not use water.

Special hazards arising from the substance or mixture No further relevant information available.

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up:

Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container.

Sweep up spilled product into receptacles.

Dispose contaminated material as waste according to section 13 of the SDS.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:**Precautions for safe handling**

Avoid contact with skin.

Prevent formation of aerosols.

Flammable mixtures with air can be formed in emptied containers. Do not puncture, cut, drill, heat or weld uncleaned drums.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Use only in explosion protected area.

Protect against electrostatic charges.

Use explosion-proof apparatus / fittings and spark-proof tools.

(Cont. on page 4)

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Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 3)

Empty containers may retain hazardous residue, both liquid and vapor.

Conditions for safe storage, including any incompatibilities**Storage:**

Information about storage in one common storage facility: Use only in explosion protected area.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters**Components with limit values that require monitoring at the workplace:****95-47-6 Xylene (o)**

PEL (USA)	Long-term value: 435 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV (USA)	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI

8052-41-3 Stoddard solvent

PEL (USA)	Long-term value: 2900 mg/m ³ , 500 ppm
REL (USA)	Long-term value: 350 mg/m ³ Ceiling limit value: 1800* mg/m ³ *15-min
TLV (USA)	Long-term value: 525 mg/m ³ , 100 ppm

8052-42-4 Asphalt

REL (USA)	Ceiling limit value: 5* mg/m ³ *15-min; See Pocket Guide App. A
TLV (USA)	Long-term value: 0.5* mg/m ³ *inh. fraction; as benzene-soluble aerosol; BEIp

Ingredients with biological limit values:**95-47-6 Xylene (o)**

BEI (USA)	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
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8052-42-4 Asphalt

BEI (USA)	- Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
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Additional information: The lists that were valid during the creation were used as basis.

Exposure controls**Personal protective equipment:**

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

(Cont. on page 5)

USGHS

Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 4)

A chemical cartridge respirator with organic vapor cartridge is required if occupational exposure limits are exceeded. A dust/mist cartridge or prefilter may be needed in addition to control exposure to mist. Supplied air respirator (SCBA) is required at exposure levels above the capabilities of a chemical cartridge respirator.

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Eye protection:

Safety glasses with side shield protection.

Safety glasses with side shields should be worn to prevent contact due to splashing. Under high vapor mist concentrations, tightly sealed goggles should be worn.



A face shield should also be worn if there is potential exposure to splash or spray.

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information**Appearance:**

Form:	Liquid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not determined.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	161 °C (321.8 °F)
Flash point:	27 °C (80.6 °F)

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 465 °C (869 °F)

Decomposition temperature: Not determined.

Auto igniting: Product is not self-igniting.

Danger of explosion: In use, may form flammable/explosive vapor-air mixture.

Explosion limits:

Lower:	1.7 Vol %
Upper:	7.6 Vol %
VOC Content (max):	Not determined.

Vapor pressure at 20 °C (68 °F):	7 hPa (5.3 mm Hg)
Density: (~) at 20 °C (68 °F)	1 g/cm ³ (8.3 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.

Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

(Cont. on page 6)

USGHS

Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 5)

Partition coefficient (n-octanol/water): Not determined.

Viscosity:**Dynamic:**

Not determined.

Kinematic:

Not determined.

Molecular weight

Not applicable.

Other information

No further relevant information available.

10 Stability and reactivity**Reactivity** Stable under normal conditions.**Chemical stability****Thermal decomposition:** No decomposition if used according to specifications.**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

Other potentially hazardous products may also be formed.

Additional information: See section 7 for information on handling, storage and conditions to be avoided.**11 Toxicological information****Information on toxicological effects****Acute toxicity:****Primary irritant effect:****on the skin:** Causes skin irritation.**on the eye:** No irritating effect expected**inhalation:** No irritating effect expected**Additional toxicological information:**

The product can cause inheritable damage.

Over exposure by inhalation or ingestion may be fatal. Chemicals contained in this product can affect the skin, heart, brain, liver, kidneys, lungs and spleen. Some harmful effects are also possible through skin absorption.

Carcinogenic categories**IARC (International Agency for Research on Cancer) Human Carcinogenicity:**
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

95-47-6	Xylene (o)	3
8052-42-4	Asphalt	2B
100-41-4	Ethylbenzene	2B

NTP (National Toxicology Program)**K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

USGHS

(Cont. on page 7)

Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 6)

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Disposal methods:

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

Recommendation:



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

14 Transport information

UN-Number

DOT, IMDG, IATA UN3295

UN proper shipping name

DOT Hydrocarbons, liquid, n.o.s.
IMDG, IATA HYDROCARBONS, LIQUID, N.O.S.

Transport hazard class(es)

DOT



Class 3 Flammable liquids

(Cont. on page 8)

USGHS

Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 7)

Label 3

IMDG, IATA

Class 3 Flammable liquids
Label 3Packing group
DOT, IMDG, IATA IIIEnvironmental hazards:
Marine pollutant: NoSpecial precautions for user Warning: Flammable liquids
Danger code (Kemler): 30
EMS Number: F-E,S-D
Stowage Category A

Transport/Additional information:

IMDG
Limited quantities (LQ) 5L
Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation": UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, III

* 15 Regulatory information

SARA (Superfund Amendments and Reauthorization Act)

Section 302/304 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

95-47-6 Xylene (o) 14.5%

SARA Section 312/Tier I & II Hazard Categories:

Physical Hazard - Flammable (gases, aerosols, liquids, or solids)
Health Hazard - Carcinogenicity
Health Hazard - Skin Corrosion or Irritation
Health Hazard - Specific target organ toxicity (single or repeated exposure)
Health Hazard - Germ cell mutagenicity

North America Chemical Inventory Status

TSCA (Toxic Substances Control Act - United States):

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

Right to Know Ingredient Disclosure:

616-38-6 dimethyl carbonate

California Proposition 65: (Substances <0.1% unless noted in Section 3)

Chemicals known to cause cancer:

Ethylbenzene

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

(Cont. on page 9)

USGHS

Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 8)

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenicity Categories

TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)
Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable

Xylene (o)

A4

Asphalt

A4

NIOSH-Cancer (National Institute for Occupational Safety and Health)

8052-42-4 | Asphalt

Volatile Organic Compounds (VOC) reported per the Emission Standards. 192 grams/liter**16 Other information**

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:

GCP Applied Technologies

62 Whittemore Avenue

Cambridge, MA 02140 USA

USA: +1-617-876-1400 (24 hours)

+1-800-354-5414

Date of preparation / last revision 05/08/2018 / -**The first date of preparation** 03/04/2015**Number of revision times and the latest revision date** 1.0 / 05/08/2018

USGHS

1 Identification

Product identifier

Trade name: *Bituthene Liquid Membrane Part A*

SDS ID Number: 60025

Relevant identified uses of the substance or mixture, and uses advised against
Specialty construction product. Not intended for other uses

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

May cause cancer.

Label elements: The product is classified and labeled according to the Globally Harmonized System (GHS)

Hazard pictograms



GHS08

Danger

Hazard statements

May cause cancer.

Precautionary statements

Wear protective gloves/protective clothing/eye protection/face protection.

Do not handle until all safety precautions have been read and understood.

Obtain special instructions before use.

IF exposed or concerned: Get medical advice/attention.

Dispose of contents/container in accordance with local/regional/national/international regulations.

NFPA ratings (scale 0 - 4)



Health = 2

Fire = 1

Reactivity = 1

Safety Data Sheet

Printing date 10/28/2016

Version Number 1.0

Reviewed on 10/28/2016

Trade name: *Bituthene Liquid Membrane Part A*

(Cont. from page 1)

HMIS-ratings (scale 0 - 4)

HEALTH	2
FIRE	1
REACTIVITY	1

Health = *2

Flammability = 1

Reactivity = 1

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**3 Composition/information on ingredients****Chemical characterization: Mixture****Description:** Mixture of the hazardous substance(s) listed below with additional nonhazardous ingredients.**Hazardous components:**

8052-42-4	Asphalt	20-25%
64742-04-7	Extracts (petroleum), heavy paraffinic distillate solvent	10-20%
130498-29-2	Polycyclic Aromatic Hydrocarbons	0.1-0.3%

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.**4 First-aid measures****Description of first aid measures****General information:**

Get medical advice/attention if you feel unwell.

After inhalation:

If symptoms develop, supply fresh air. If required, provide artificial respiration and seek immediate medical treatment.

After skin contact:

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

If residue remains, clean with waterless handcream or abrasive soap. Never use solvents.

After eye contact:

If contact with residue causes eye irritation, flush eyes with water for at least 15 minutes while holding eyelids open.

After swallowing: Do not induce vomiting; immediately call for medical help.**Information for doctor:****Most important symptoms and effects, both acute and delayed** No further relevant information available.**Indication of any immediate medical attention and special treatment needed** No further relevant information available.**5 Fire-fighting measures****Extinguishing media****Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fire with alcohol resistant foam.**Special hazards arising from the substance or mixture** No further relevant information available.**Additional information**

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

USGHS

(Cont. on page 3)

Trade name: Bituthene Liquid Membrane Part A

(Cont. from page 2)

6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Environmental precautions: Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:

Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container.

Sweep up spilled product into receptacles.

Pick up mechanically.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**Handling:****Precautions for safe handling**

Open and handle receptacle with care.

Prevent formation of aerosols.

Avoid contact with skin and eyes.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities**Storage:**

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters**Components with limit values that require monitoring at the workplace:****8052-42-4 Asphalt**

REL (USA)	Ceiling limit value: 5* mg/m ³ *15-min; See Pocket Guide App. A
TLV (USA)	Long-term value: 0.5* mg/m ³ *inh. fraction; as benzene-soluble aerosol; BEIp

Ingredients with biological limit values:**8052-42-4 Asphalt**

BEI (USA)	- Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
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130498-29-2 Polycyclic Aromatic Hydrocarbons

BEI (USA)	Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
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Additional information: The lists that were valid during the creation were used as basis.

(Cont. on page 4)

USGHS

Trade name: Bituthene Liquid Membrane Part A

(Cont. from page 3)

Exposure controls
Personal protective equipment:
General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Store protective clothing separately.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Eye protection:


Safety glasses with side shield protection.



A face shield should also be worn if there is potential exposure to splash or spray.

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties
Information on basic physical and chemical properties
General Information
Appearance:

Form:	Liquid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not determined.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	200 °C (392 °F)

Flammability (solid, gaseous): Not applicable.

Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.
VOC Content (max):	Not determined.

Vapor pressure:	Not determined.
Density: (~) at 20 °C (68 °F)	1.1 g/cm ³ (9.18 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.

(Cont. on page 5)

USGHS

Safety Data Sheet

Printing date 10/28/2016

Version Number 1.0

Reviewed on 10/28/2016

Trade name: *Bituthene Liquid Membrane Part A*

(Cont. from page 4)

Solubility in / Miscibility with Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

Molecular weight: Not applicable.

Other information: No further relevant information available.

10 Stability and reactivity

Reactivity: Stable under normal conditions.

Chemical stability:

Thermal decomposition: No decomposition if used according to specifications.

Possibility of hazardous reactions: No further relevant information available.

Conditions to avoid: No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Other potentially hazardous products may also be formed.

Additional information: See section 7 for information on handling, storage and conditions to be avoided.

11 Toxicological information**Information on toxicological effects****Acute toxicity:****Primary irritant effect:**

on the skin: No irritating effect expected

on the eye: No irritating effect expected

inhalation: No irritating effect expected

Additional toxicological information: May cause cancer.

Carcinogenic categories

IARC (International Agency for Research on Cancer) Human Carcinogenicity:
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

69012-64-2	Silica, fume	3
8052-42-4	Asphalt	2B
64742-04-7	Extracts (petroleum), heavy paraffinic distillate solvent	1
130498-29-2	Polycyclic Aromatic Hydrocarbons	2A

NTP (National Toxicology Program)

K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

USGHS
(Cont. on page 6)

Trade name: *Bituthene Liquid Membrane Part A*

(Cont. from page 5)

12 Ecological information**Toxicity****Aquatic toxicity:**

64742-04-7 Extracts (petroleum), heavy paraffinic distillate solvent

LC/EC/IC50 (static) | 18.8 mg/l (algae) (OECD guideline 201)

Persistence and degradability No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not known to be hazardous to water.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.**13 Disposal considerations****Waste treatment methods** Comply with Federal, State and local regulations.**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**14 Transport information****UN-Number**

DOT, IMDG, IATA

Not applicable.

UN proper shipping name

DOT, IMDG, IATA

Not applicable.

Transport hazard class(es)

DOT, IMDG, IATA

Class

Not applicable.

Packing group

DOT, IMDG, IATA

Not applicable.

Environmental hazards:**Marine pollutant:**

No

Special precautions for user

Not applicable.

Transport/Additional information: Not classified as a dangerous good for transport by road, rail or air.**DOT****Remarks:**

Not Regulated.

(Cont. on page 7)

USGHS

Safety Data Sheet

Printing date 10/28/2016

Version Number 1.0

Reviewed on 10/28/2016

Trade name: *Bituthene Liquid Membrane Part A*

(Cont. from page 6)

UN "Model Regulation": Not applicable.

15 Regulatory information**SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: Health Hazard - Carcinogenicity**North America Chemical Inventory Status****TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

Right to Know Ingredient Disclosure:

69012-64-2	Silica, fume
69102-90-5	1,3-Butadiene, homopolymer, hydroxy-terminated
25791-96-2	Glycerol, propylene oxide polymer
8001-78-3	Castor oil, hydrogenated
1332-58-7	Natural aluminosilicate (Kaolin)

California Proposition 65**Chemicals known to cause cancer:**

Extracts (petroleum), heavy paraffinic distillate solvent

Polycyclic Aromatic Hydrocarbons

Quartz (SiO₂)

4-vinylcyclohexene

1,3-Butadiene

Chemicals known to cause reproductive toxicity for females:

100-40-3 | 4-vinylcyclohexene

106-99-0 | 1,3-Butadiene

Chemicals known to cause reproductive toxicity for males:

106-99-0 | 1,3-Butadiene

Chemicals known to cause developmental toxicity:

106-99-0 | 1,3-Butadiene

Carcinogenicity Categories**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)**Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

Asphalt

A4

Natural aluminosilicate (Kaolin)

A4

NIOSH-Cancer (National Institute for Occupational Safety and Health)

8052-42-4 | Asphalt

Volatile Organic Compounds (VOC) reported per the Emission Standards. (gr/L) 10 gr/L (as applied)**16 Other information**

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

(Cont. on page 8)

USGHS

Safety Data Sheet

Printing date 10/28/2016

Version Number 1.0

Reviewed on 10/28/2016

Trade name: *Bituthene Liquid Membrane Part A*

(Cont. from page 7)

Department issuing SDS:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414

Other Information:

There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis. Therefore preventing the onset of silicosis will also reduce the cancer risk.

Date of preparation / last revision 10/28/2016 / -

The first date of preparation 03/03/2015

Number of revision times and the latest revision date 1.0 / 10/28/2016

USGHS

1 Identification

Product identifier

Trade name: *Bituthene Liquid Membrane & Deck Prep Part B*

SDS ID Number: 583

Relevant identified uses of the substance or mixture, and uses advised against
Specialty construction product. Not intended for other uses

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

Harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

Label elements: The product is classified and labeled according to the Globally Harmonized System (GHS)

Hazard pictograms



GHS07 GHS08

Danger

Hazard statements

Harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.

Safety Data Sheet

Printing date 10/31/2016

Version Number 1.2

Reviewed on 10/31/2016

Trade name: Bituthene Liquid Membrane & Deck Prep Part B

(Cont. from page 1)

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

[In case of inadequate ventilation] wear respiratory protection.

Wear eye protection / face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF ON SKIN: Wash with plenty of water.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

NFPA ratings (scale 0 - 4)

Health = 2

Fire = 1

Reactivity = 1

HMIS-ratings (scale 0 - 4)

Health = *2

Flammability = 1

Reactivity = 1

Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients**Chemical characterization: Mixture**

Description: Mixture of the hazardous substance(s) listed below with additional nonhazardous ingredients.

Hazardous components:

26447-40-5	Methylenediphenyl diisocyanate, mixture of isomers	30-50%
101-68-8	Diphenylmethane-4,4'-di-isocyanate	30-50%
61788-32-7	Terphenyl plasticiser, hydrogenated	10-20%
78-40-0	Triethylphosphate	1.0-3.0%

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

4 First-aid measures**Description of first aid measures**

General information: Get medical advice/attention if you feel unwell.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

After eye contact:

Rinse opened eye for several minutes under running water.

Seek immediate medical advice.

After swallowing:

Rinse mouth.

Never give anything by mouth to an unconscious person.

Do not induce vomiting; immediately call for medical help.

(Cont. on page 3)

USGHS

Safety Data Sheet

Printing date 10/31/2016

Version Number 1.2

Reviewed on 10/31/2016

Trade name: *Bituthene Liquid Membrane & Deck Prep Part B*

(Cont. from page 2)

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Special hazards arising from the substance or mixture No further relevant information available.

Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up:

Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container.

Sweep up spilled product into receptacles.

Dispose contaminated material as waste according to section 13 of the SDS.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**Handling:****Precautions for safe handling**

Open and handle receptacle with care.

Prevent formation of aerosols.

Avoid contact with skin.

Avoid contact with eyes.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities**Storage:**

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

(Cont. on page 4)

USGHS

Trade name: Bituthene Liquid Membrane & Deck Prep Part B

(Cont. from page 3)

Control parameters
Components with limit values that require monitoring at the workplace:
101-68-8 Diphenylmethane-4,4'-di-isocyanate

PEL (USA)	Ceiling limit value: 0.2 mg/m ³ , 0.02 ppm
REL (USA)	Long-term value: 0.05 mg/m ³ , 0.005 ppm Ceiling limit value: 0.2* mg/m ³ , 0.02* ppm *10-min
TLV (USA)	Long-term value: 0.051 mg/m ³ , 0.005 ppm

61788-32-7 Terphenyl plasticiser, hydrogenated

REL (USA)	Long-term value: 5 mg/m ³ , 0.5 ppm
TLV (USA)	Long-term value: 4.9 mg/m ³ , 0.5 ppm nonirradiated

78-40-0 Triethylphosphate

WEEL (USA)	Long-term value: 7.45 mg/m ³
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Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:

Avoid contact with the eyes and skin.

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Eye protection:


Safety glasses with side shield protection.

Safety glasses with side shields should be worn to prevent contact due to splashing. Under high vapor mist concentrations, tightly sealed goggles should be worn.



A face shield should also be worn if there is potential exposure to splash or spray.

Body protection:

Protective work clothing

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties
Information on basic physical and chemical properties
General Information
Appearance:

Form:	Liquid
Color:	According to product specification
Odor:	Characteristic

(Cont. on page 5)

USGHS

Safety Data Sheet

Printing date 10/31/2016

Version Number 1.2

Reviewed on 10/31/2016

Trade name: *Bituthene Liquid Membrane & Deck Prep Part B*

(Cont. from page 4)

Odor threshold:	Not determined.
pH-value (~):	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	208 °C (406 °F)
Flash point:	212 °C (414 °F)
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
VOC Content (max):	Not determined.
Vapor pressure:	Not determined.
Density: (~)	Not determined.
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix. Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Molecular weight	Not applicable.
Other information	These are typical values and do not constitute a specification.

* **10 Stability and reactivity****Reactivity** Stable under normal conditions.**Chemical stability****Thermal decomposition:** No decomposition if used according to specifications.**Possibility of hazardous reactions** No further relevant information available.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

(possible HCN)

Other potentially hazardous products may also be formed.

Additional information: See section 7 for information on handling, storage and conditions to be avoided.* **11 Toxicological information****Delayed and immediate effects and chronic effects from short or long term exposure**

May cause damage to organs through prolonged or repeated exposure.

(Cont. on page 6)

USGHS

Safety Data Sheet

Printing date 10/31/2016

Version Number 1.2

Reviewed on 10/31/2016

Trade name: *Bituthene Liquid Membrane & Deck Prep Part B*

(Cont. from page 5)

Information on toxicological effects**Acute toxicity:****LD/LC50 values relevant for classification:****101-68-8 Diphenylmethane-4,4'-di-isocyanate**

Oral	LD50	> 10000 mg/kg (rat)
Dermal	LD50	> 9400 mg/kg (rabbit)
Inhalation	LC50, 4h	0.49 mg/l (rat)

Primary irritant effect:**on the skin:** Causes skin irritation.**on the eye:** Causes serious eye irritation.**inhalation:**

Harmful if inhaled.

Causes damage to organs.

May cause respiratory irritation.

Ingestion: May cause damage to organs through prolonged or repeated exposure.**Sensitization:**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Additional toxicological information: Suspected of causing cancer.**Carcinogenic categories****IARC (International Agency for Research on Cancer) Human Carcinogenicity:****Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable**

101-68-8 | Diphenylmethane-4,4'-di-isocyanate

3

NTP (National Toxicology Program)**K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

USGHS

(Cont. on page 7)

Safety Data Sheet

Printing date 10/31/2016

Version Number 1.2

Reviewed on 10/31/2016

Trade name: *Bituthene Liquid Membrane & Deck Prep Part B*

(Cont. from page 6)

13 Disposal considerations**Waste treatment methods****Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information**UN-Number**

DOT, IMDG, IATA

Not applicable.

UN proper shipping name

DOT, IMDG, IATA

Not applicable.

Transport hazard class(es)

DOT, IMDG, IATA

Class

Not applicable.

Packing group

DOT, IMDG, IATA

Not applicable.

Environmental hazards:**Marine pollutant:**

No

Special precautions for user

Not applicable.

Transport/Additional information: Not classified as a dangerous good for transport by road, rail or air.

DOT**Remarks:**

Not Regulated.

UN "Model Regulation":

Not applicable.

15 Regulatory information**SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

101-68-8 | Diphenylmethane-4,4'-di-isocyanate

30.9%

SARA Section 312/Tier I & II Hazard Categories:

Health Hazard - Carcinogenicity

Health Hazard - Acute toxicity (any route of exposure)

Health Hazard - Skin Corrosion or Irritation

Health Hazard - Respiratory or Skin Sensitization

Health Hazard - Serious eye damage or eye irritation

Health Hazard - Specific target organ toxicity (single or repeated exposure)

North America Chemical Inventory Status**TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

Right to Know Ingredient Disclosure:

39310-05-9 | Methylenebis(isocyanatobenzene) polymer

(Cont. on page 8)

USGHS

Safety Data Sheet

Printing date 10/31/2016

Version Number 1.2

Reviewed on 10/31/2016

Trade name: Bituthene Liquid Membrane & Deck Prep Part B

(Cont. from page 7)

68956-74-1	Quaterphenyls
26140-60-3	Terphenyl plasticiser unhydrogenated

California Proposition 65**Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenicity Categories**EPA (Environmental Protection Agency)**

101-68-8	Diphenylmethane-4,4'-di-isocyanate	D, CBD
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TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)**Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

None of the ingredients is listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards. (gr/L) 10 gr/L (as applied)**16 Other information**

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414

Date of preparation / last revision 10/31/2016 / 1.1**The first date of preparation** 08/03/2006**Number of revision times and the latest revision date** 1.2 / 10/31/2016

USGHS

1 Identification

Product identifier

Trade name: *Hydroduct® Waterproofing Products*

SDS ID Number:
2902

Additional Information: Full product name listing available in Section 16.

Relevant identified uses of the substance or mixture, and uses advised against:

Waterproofing.
Specialty construction product. Not intended for other uses.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified, according to the Globally Harmonized System (GHS).

Additional information:

SDS's are not required for finished articles. nevertheless, the following information is provided to assist with safe use.

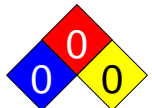
Label elements:

Hazard pictograms Not applicable.

Not applicable.

Hazard statements Not applicable.

NFPA ratings (scale 0 - 4)



Health = 0
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 0
Flammability = 0
Reactivity = 0

Trade name: *Hydroduct® Waterproofing Products*

(Cont. from page 1)

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixture

Hazardous components: Not applicable.

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

4 First-aid measures

Description of first aid measures

General information: Get medical advice/attention if you feel unwell.

After inhalation: No special measures required.

After skin contact: Due to the physical nature of this product adverse effects are not likely.

After eye contact:

Rinse cautiously with water for several minutes.

If symptoms persist, consult a physician.

After swallowing: Due to physical nature of this product, ingestion is not likely.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment: Wear personal protective equipment.

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up: No special measures required.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

USGHS

(Cont. on page 3)

Trade name: *Hydroduct® Waterproofing Products*

(Cont. from page 2)

7 Handling and storage

Handling:

Precautions for safe handling For professional use only. Keep out of children's reach.

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Protect from heat and direct sunlight.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures: Use good personal hygiene practices.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: No chemical-protective gloves required.

Eye protection:



Safety glasses with side shield protection.

Body protection: Use personal protective equipment as required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Solid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not applicable.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

(Cont. on page 4)

USGHS

Safety Data Sheet

Printing date 04/13/2018

Version Number 1.0

Reviewed on 04/13/2018

Trade name: *Hydroduct® Waterproofing Products*

(Cont. from page 3)

Flash point:	Not applicable.
Flammability (solid, gaseous):	Not determined.
Ignition temperature:	Undetermined.
Decomposition temperature:	Not determined.
Auto igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
VOC Content (max):	Not determined.
Vapor pressure:	Not applicable.
Density: (~) at 20 °C (68 °F)	1 g/cm ³ (8.3 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Molecular weight	Not applicable.
Other information	No further relevant information available.

* **10 Stability and reactivity****Reactivity** Stable under normal conditions.**Chemical stability****Thermal decomposition:** No decomposition if used according to specifications.**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** Carbon monoxide and carbon dioxide* **11 Toxicological information****Information on toxicological effects****Acute toxicity:****Primary irritant effect:****on the skin:** No irritating effect expected**on the eye:** No irritating effect expected**inhalation:** No irritating effect expected

(Cont. on page 5)

USGHS

Safety Data Sheet

Printing date 04/13/2018

Version Number 1.0

Reviewed on 04/13/2018

Trade name: *Hydroduct® Waterproofing Products*

(Cont. from page 4)

Additional toxicological information:**Carcinogenic categories****IARC (International Agency for Research on Cancer) Human Carcinogenicity:**
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

None of the ingredients is listed.

NTP (National Toxicology Program)**K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not known to be hazardous to water.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.**13 Disposal considerations****Disposal methods:**

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:**Recommendation:** Dispose of contents/container in accordance with local/regional/national/international regulations.**14 Transport information****UN-Number**
DOT, IMDG, IATA

Not applicable.

(Cont. on page 6)

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Safety Data Sheet

Printing date 04/13/2018

Version Number 1.0

Reviewed on 04/13/2018

Trade name: *Hydroduct® Waterproofing Products*

(Cont. from page 5)

UN proper shipping name

DOT, IMDG, IATA Not applicable.

Transport hazard class(es)DOT, IMDG, IATA
Class Not applicable.**Packing group**

DOT, IMDG, IATA Not applicable.

Environmental hazards:

Marine pollutant: No

Special precautions for user

Not applicable.

Transport/Additional information: Not classified as a dangerous good for transport by road, rail or air.**DOT****Remarks:** Not Regulated.**UN "Model Regulation":**

Not applicable.

15 Regulatory information**SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: None**North America Chemical Inventory Status****TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

California Proposition 65: (Substances <0.1% unless noted in Section 3)**Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenicity Categories**TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)****Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

None of the ingredients is listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.

If no g/L value is provided this product is not subject to above standard.

USGHS

(Cont. on page 7)

Safety Data Sheet

Printing date 04/13/2018

Version Number 1.0

Reviewed on 04/13/2018

Trade name: Hydroduct® Waterproofing Products

(Cont. from page 6)

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

This SDS is for the following products: Hydroduct® 220, Hydroduct® 225, Hydroduct® 500, Hydroduct® 500 RS, Hydroduct® 550, Hydroduct® 550 RS, Hydroduct® 600, Hydroduct® 600 coil, Hydroduct® 660.

Department issuing SDS:

GCP Applied Technologies

62 Whittemore Avenue

Cambridge, MA 02140 USA

USA: +1-617-876-1400 (24 hours)

+1-800-354-5414

Date of preparation / last revision 04/13/2018 / -**The first date of preparation** 04/13/2018**Number of revision times and the latest revision date** 1.0 / 04/13/2018

USGHS

Safety Data Sheet

Printing date 11/10/2016

Version Number 1.0

Reviewed on 11/10/2016

1 Identification

Product identifier

Trade name: Adcor 500S

SDS ID Number: 2734

Relevant identified uses of the substance or mixture, and uses advised against
Specialty construction product. Not intended for other uses

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

Label elements:

Hazard pictograms Not applicable.

Not applicable.

Hazard statements Not applicable.

NFPA ratings (scale 0 - 4)



Health = 1
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)

HEALTH	1
FIRE	0
REACTIVITY	0

Health = 1
Flammability = 0
Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Safety Data Sheet

Printing date 11/10/2016

Version Number 1.0

Reviewed on 11/10/2016

Trade name: *Adcor 500S*

(Cont. from page 1)

* **3 Composition/information on ingredients****Chemical characterization: Mixture****Hazardous components:** Not applicable.**Additional information:** Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.* **4 First-aid measures****Description of first aid measures****General information:** Get medical advice/attention if you feel unwell.**After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact:

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

After eye contact: Rinse cautiously with water for several minutes.**After swallowing:**

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:**Most important symptoms and effects, both acute and delayed** No further relevant information available.**Indication of any immediate medical attention and special treatment needed** No further relevant information available.* **5 Fire-fighting measures****Special hazards arising from the substance or mixture** No further relevant information available.**Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.* **6 Accidental release measures****Environmental precautions:** No special measures required.**Methods and material for containment and cleaning up:** No special measures required.**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

* **7 Handling and storage****Handling:****Precautions for safe handling** No special precautions are necessary if used correctly.**Information about protection against explosions and fires:** No special measures required.

(Cont. on page 3)

USGHS

Safety Data Sheet

Printing date 11/10/2016

Version Number 1.0

Reviewed on 11/10/2016

Trade name: *Adcor 500S*

(Cont. from page 2)

Conditions for safe storage, including any incompatibilities**Storage:****Information about storage in one common storage facility:** No special measures required.**Further information about storage conditions:** Keep receptacle tightly sealed.**Specific end use(s)** No further relevant information available.**8 Exposure controls/personal protection****Additional information about design of technical systems:** No further data; see item 7.**Control parameters****Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.**Exposure controls****Personal protective equipment:****General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.**Breathing equipment:**

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Protective gloves**Eye protection:**

Safety glasses with side shield protection.

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties**Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Solid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not applicable.**Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.

(Cont. on page 4)

USGHS

Safety Data Sheet

Printing date 11/10/2016

Version Number 1.0

Reviewed on 11/10/2016

Trade name: *Adcor 500S*

(Cont. from page 3)

Flammability (solid, gaseous):	Not determined.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not applicable.
Upper:	Not applicable.
VOC Content (max):	Not applicable.
Vapor pressure:	Not applicable.
Density: (~)	Not determined.
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Molecular weight	Not applicable.
Other information	No further relevant information available.

10 Stability and reactivity**Reactivity** Stable under normal conditions.**Chemical stability****Thermal decomposition:** No decomposition if used and stored according to specifications.**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** Carbon monoxide and carbon dioxide**11 Toxicological information****Information on toxicological effects****Acute toxicity:****Primary irritant effect:****on the skin:** No irritating effect expected**on the eye:** No irritating effect expected**inhalation:** No irritating effect expected**Additional toxicological information:****Carcinogenic categories****IARC (International Agency for Research on Cancer) Human Carcinogenicity:**
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

None of the ingredients is listed.

(Cont. on page 5)

USGHS

Safety Data Sheet

Printing date 11/10/2016

Version Number 1.0

Reviewed on 11/10/2016

Trade name: *Adcor 500S*

(Cont. from page 4)

NTP (National Toxicology Program)**K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not known to be hazardous to water.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.**13 Disposal considerations****Waste treatment methods** Comply with Federal, State and local regulations.**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**14 Transport information****UN-Number****DOT, IMDG, IATA** Not applicable.**UN proper shipping name****DOT, IMDG, IATA** Not applicable.**Transport hazard class(es)****DOT, IMDG, IATA**
Class Not applicable.**Packing group****DOT, IMDG, IATA** Not applicable.(Cont. on page 6)
USGHS

Safety Data Sheet

Printing date 11/10/2016

Version Number 1.0

Reviewed on 11/10/2016

Trade name: *Adcor 500S*

(Cont. from page 5)

Environmental hazards: Not applicable.**Special precautions for user** Not applicable.**Transport/Additional information:****DOT****Remarks:** Not Regulated.**15 Regulatory information****SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: None**North America Chemical Inventory Status****TSCA (Toxic Substances Control Act - United States):**

None of the ingredients is listed.

CEPA (Canadian DSL):

None of the ingredients is listed.

Right to Know Ingredient Disclosure:

Article - NON Regulated/Hazardous Components

California Proposition 65**Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenicity Categories**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)**Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

None of the ingredients is listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards.

If no g/L value is provided this product is not subject to above standard.

16 Other information

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

(Cont. on page 7)

USGHS

Safety Data Sheet

Printing date 11/10/2016

Version Number 1.0

Reviewed on 11/10/2016

Trade name: *Adcor 500S*

(Cont. from page 6)

Department issuing SDS:

GCP Applied Technologies

62 Whittemore Avenue

Cambridge, MA 02140 USA

USA: +1-617-876-1400 (24 hours)

+1-800-354-5414

Date of preparation / last revision 11/10/2016 / -**The first date of preparation** 11/10/2016**Number of revision times and the latest revision date** 1.0 / 11/10/2016

USGHS

1 Identification

Product identifier

Trade name: *ADCOR 500S Adhesive*

SDS ID Number: 2966

Relevant identified uses of the substance or mixture, and uses advised against:
Specialty construction product. Not intended for other uses.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA

GCP Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
CAN: 1-905-683-8561 (24 hours)
Email address: msds.gcp@gcpat.com

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)

2 Hazard(s) identification

Classification of the substance or mixture

May cause an allergic skin reaction.

Label elements: The product is classified and labeled according to the Globally Harmonized System (GHS)

Hazard pictograms



Warning

Hazard statements

May cause an allergic skin reaction.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
If on skin: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

NFPA ratings (scale 0 - 4)



Health = 2
Fire = 1
Reactivity = 0

Safety Data Sheet

Printing date 06/11/2019

Version Number 2.0

Reviewed on 06/11/2019

Trade name: *ADCOR 500S Adhesive*

(Cont. from page 1)

HMIS-ratings (scale 0 - 4)

HEALTH 2

Health = 2

FIRE 1

Flammability = 1

REACTIVITY 0

Reactivity = 0

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**3 Composition/information on ingredients****Chemical characterization: Mixture****Description:** Mixture of the hazardous substance(s) listed below with additional nonhazardous ingredients.**Hazardous components:**

1760-24-3 | N-(3-(trimethoxysilyl)propyl)ethylenediamine

0.1-<1%

Additional information: Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.**4 First-aid measures****Description of first aid measures****General information:** Get medical advice/attention if you feel unwell.**After inhalation:** IF INHALED: Remove person to fresh air and keep comfortable for breathing.**After skin contact:**

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

After eye contact: Rinse cautiously with water for several minutes.**After swallowing:**

Rinse mouth.

Do NOT induce vomiting.

Information for doctor:**Most important symptoms and effects, both acute and delayed** Allergic reactions**Indication of any immediate medical attention and special treatment needed** No further relevant information available.**5 Fire-fighting measures****Special hazards arising from the substance or mixture** No further relevant information available.**Advice for firefighters****Protective equipment:** Wear personal protective equipment.**Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.

USGHS

(Cont. on page 3)

Trade name: *ADCOR 500S Adhesive*

(Cont. from page 2)

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to section 13 of the SDS.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling Prevent formation of aerosols.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:

Information about storage in one common storage facility: No special measures required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Material of gloves Rubber or other impervious gloves should be worn to prevent skin contact.

Eye protection:



Safety glasses with side shield protection.

(Cont. on page 4)

USGHS

Safety Data Sheet

Printing date 06/11/2019

Version Number 2.0

Reviewed on 06/11/2019

Trade name: *ADCOR 500S Adhesive*

(Cont. from page 3)

Body protection:

Use personal protective equipment as required.

Take off contaminated clothing.

9 Physical and chemical properties**Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Paste
Color:	White
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value (~): Not determined.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.

Flammability (solid, gaseous): Not applicable.

Ignition temperature: Not applicable.

Decomposition temperature: Not determined.

Auto igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.
VOC Content (max):	Not determined.

Vapor pressure: Not determined.

Density: (~) at 20 °C (68 °F) 1.5 g/cm³ (12.5 lbs/gal)

Relative density Not determined.

Vapor density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

Molecular weight Not applicable.

Other information

No further relevant information available.

10 Stability and reactivity**Reactivity**

Stable under normal conditions.

No further relevant information available.

Chemical stability

Thermal decomposition: No decomposition if used according to specifications.

(Cont. on page 5)

USGHS

Trade name: *ADCOR 500S Adhesive*

(Cont. from page 4)

Possibility of hazardous reactions

No dangerous reactions known.
No further relevant information available.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information**Information on toxicological effects**

Acute toxicity:

Primary irritant effect:

on the skin: No irritating effect expected

on the eye: No irritating effect expected

inhalation: No irritating effect expected

Sensitization: May cause an allergic skin reaction.

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer) Human Carcinogenicity:
Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable

None of the ingredients are listed.

NTP (National Toxicology Program)

K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information**Toxicity**

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

USGHS
(Cont. on page 6)

Safety Data Sheet

Printing date 06/11/2019

Version Number 2.0

Reviewed on 06/11/2019

Trade name: *ADCOR 500S Adhesive*

(Cont. from page 5)

* 13 Disposal considerations

Disposal methods:**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

* 14 Transport information

UN-Number

DOT, IMDG, IATA Not applicable.

UN proper shipping name

DOT, IMDG, IATA Not applicable.

Transport hazard class(es)

DOT, IMDG, IATA
Class Not applicable.

Packing group

DOT, IMDG, IATA Not applicable.

Environmental hazards: Not applicable.

Special precautions for user Not applicable.

Transport/Additional information:**DOT**

Remarks: Not Regulated.

UN "Model Regulation": Not applicable.

* 15 Regulatory information

SARA (Superfund Amendments and Reauthorization Act)**Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazard Categories: Health Hazard - Respiratory or Skin Sensitization

North America Chemical Inventory Status**TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

Right to Know Ingredient Disclosure:

	Proprietary Nonhazardous Polymer - NJTSN 801416152
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471-34-1	Calcium carbonate; limestone powder
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(Cont. on page 7)

USGHS

Safety Data Sheet

Printing date 06/11/2019

Version Number 2.0

Reviewed on 06/11/2019

Trade name: *ADCOR 500S Adhesive*

(Cont. from page 6)

Proprietary plasticizer - NJTSN 801416153

California Proposition 65: (Substances <0.1% unless noted in Section 3)**Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

67-56-1 | Methanol

Carcinogenicity Categories**TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)****Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

None of the ingredients are listed.

NIOSH-Cancer (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards. 30 g/l**16 Other information**

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

Department issuing SDS:

GCP Applied Technologies
62 Whittemore Avenue
Cambridge, MA 02140 USA
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414

The first date of preparation 10/31/2018**Number of revision times and the latest revision date** 2.0 / 06/11/2019

USGHS

PREPRUFE® Waterproofing Membrane

Five Year Material Warranty

WARRANTY NO. _____

NAME OF BUILDING _____

LOCATION OF BUILDING _____

NAME OF OWNER _____

CONTRACTOR _____

PRODUCT(S) USED PREPRUFE® 300R Plus

TOTAL AREA (SF) _____

DATE OF COMPLETED INSTALLATION _____

GCP Applied Technologies Inc. ("GCP") hereby warrants that for a period of Five (5) years from the date of completion of installation identified above:

1. Water will not leak directly through any individual Membrane as a result of deterioration of the sheet caused by ordinary wear and tear and the effects thereof.
2. The Membrane will bridge ruptures caused by cracking of the immediate substrate up to 1/16th of an inch wide.

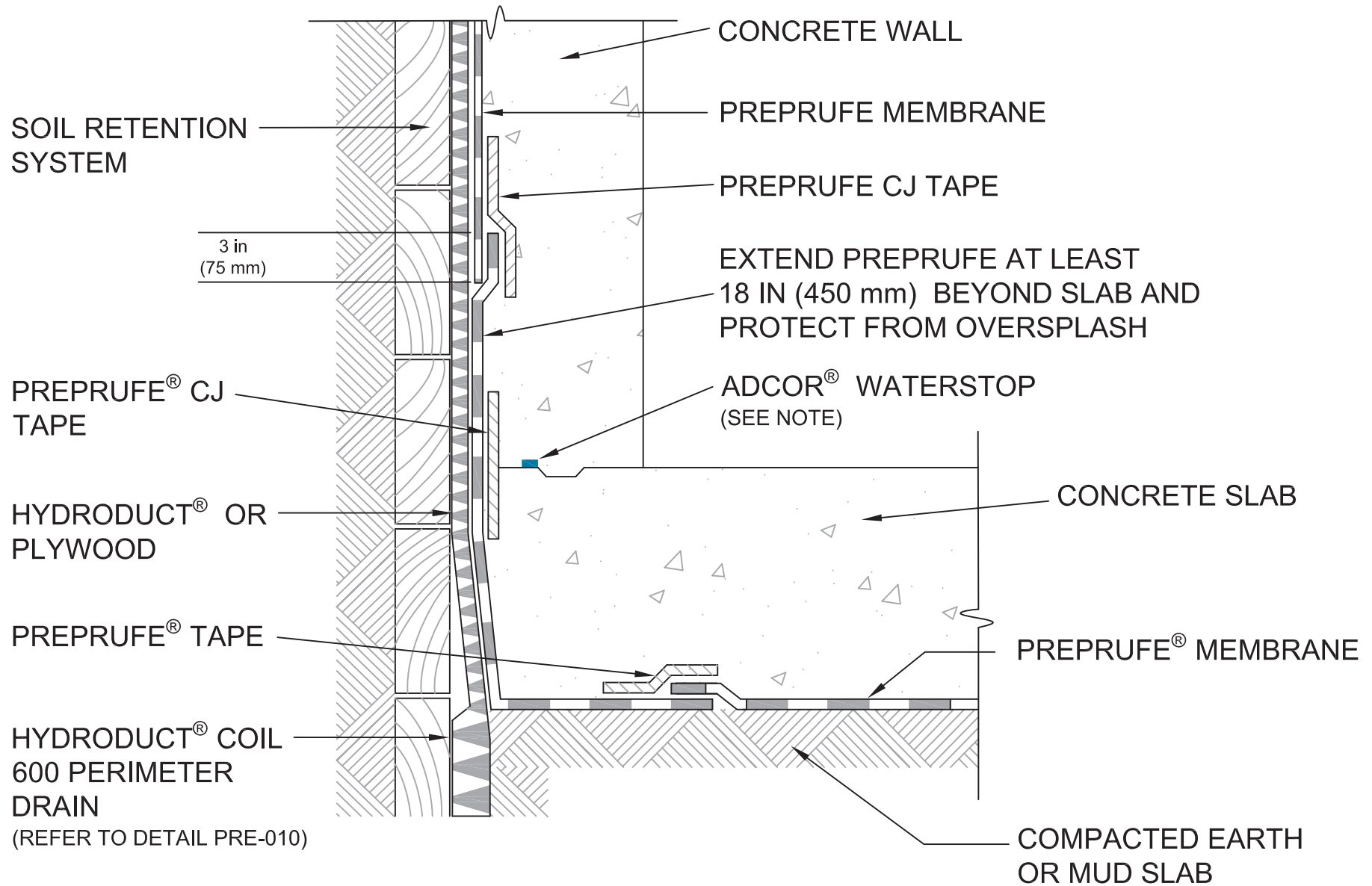
If at any time during such Five (5) year period the Membrane is found by GCP not to comply with this warranty, then GCP will supply to the owner replacement Membrane in a quantity equal to the material found to be nonconforming, with a value not to exceed the purchase price for the material paid to GCP for the original installation.

This warranty does not apply to any failure caused by or due to workmanship or improper installation of the Membrane, abuse of the Membrane, or chemical incompatibility with other materials, acts of God, inadequate or faulty design of the subject structure or to repairs or installations made by other persons. In addition, this warranty does not cover any costs or expenses associated with 1) the removal, excavation or replacement of any material in connection with the testing, repair, removal or replacement of the Membrane and, 2) damages or repairs of any kind or nature to the subject building or its' contents from leaking water or otherwise.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY AND ALL OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE REMEDIES OF THE OWNER FOR ANY BREACH OF THIS WARRANTY SHALL BE LIMITED TO THOSE HEREIN PROVIDED TO THE EXCLUSION OF ANY AND ALL OTHER REMEDIES. GCP SHALL NOT BE LIABLE IN ANY CASE FOR ANY DAMAGE TO THE BUILDING OR THE CONTENTS THEREOF, NOR WILL IT BE RESPONSIBLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR PENAL DAMAGES. NO AGREEMENT VARYING OR EXTENDING THE FOREGOING WARRANTY REMEDIES WILL BE BINDING UPON GCP UNLESS IN WRITING, SIGNED BY A DULY AUTHORIZED OFFICER OF GCP.

GCP Applied Technologies Inc.

By Title _____ Date _____



NOTE: GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



BLIND SIDE WALL TO SLAB TIE-IN OPTION - A

PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE-009-A

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 03012015

Tie into Preprufe Wall Waterproofing (Option-A)

Prior to Membrane Installation, Review the Preprufe®
Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during concrete placement. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). Surface should also be free from loose aggregate and sharp protrusions as outlined the Preprufe® Data Sheet section on Surface Preparation.

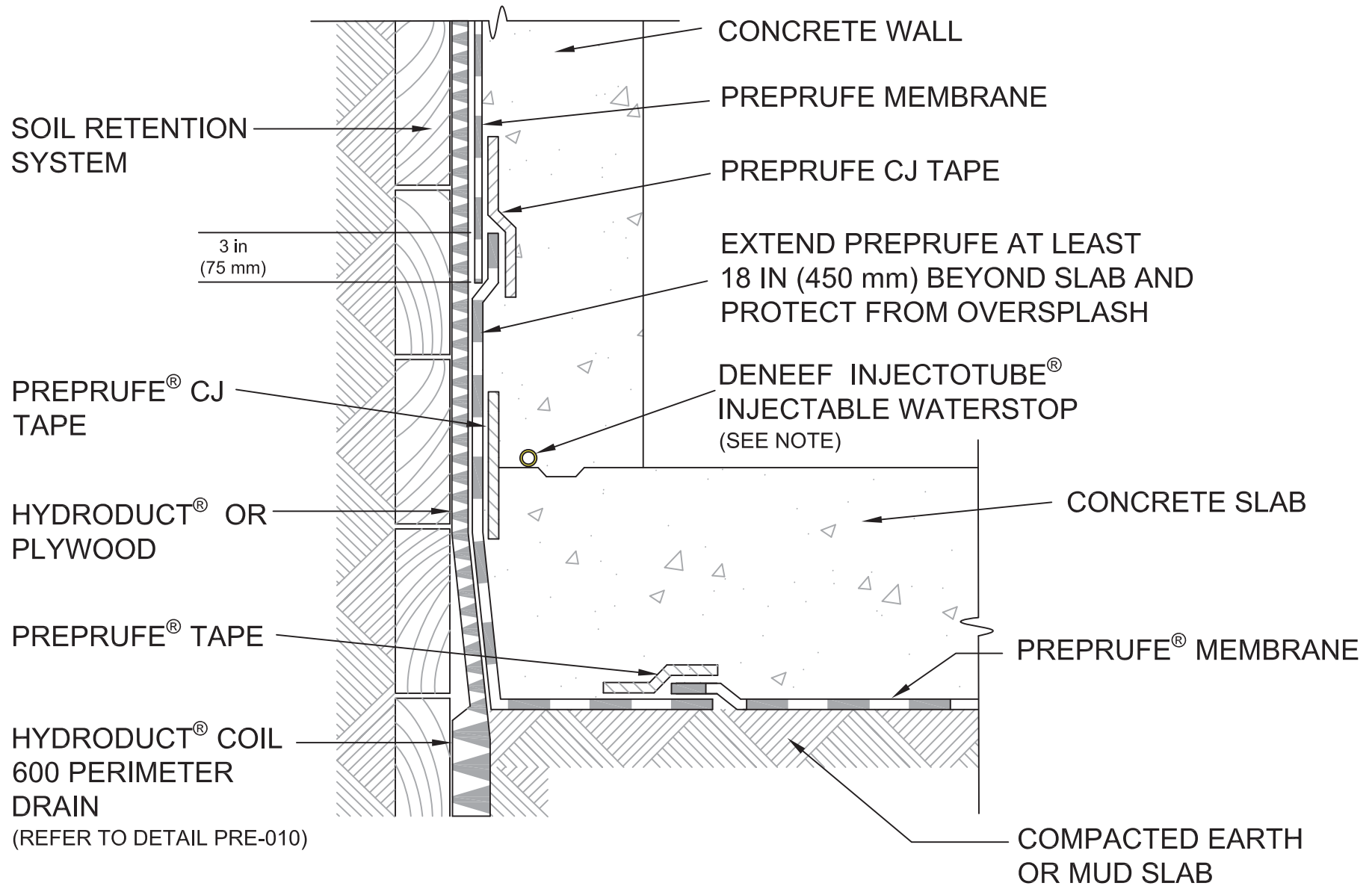
Detailing

1. Install Preprufe membrane over the mud slab or compacted earth as detailed horizontal and vertical applications on the Preprufe data sheet.
2. Continue onto the vertical surface of the prepared soil retention system a minimum of 18 in (450 mm) above the finished elevation of the structural floor slab. It is practice to extend the Preprufe membrane above the height of the rebar from the slab.
3. Apply Preprufe® CJ Tape to the Preprufe membrane centered over the finished elevation of the concrete proposed concrete slab.
4. Secure the top of the membrane to temporarily hold it in place on the vertical substrate. Care should be taken to prevent damage to this exposed membrane concrete back-splash as well as slag from rebar welding in wall forms, by keeping the release liner on and protected with protection board, plywood or other material (See PRE-060)
5. If the exposed membrane above the slab is contaminated with concrete oversplash is the lap area, it must be cleaned down to good material before adhering Preprufe Tape.
6. Install Preprufe membrane over the prepared vertical soil retention system according to standard application instructions on the Preprufe data sheet.
7. Unfasten the vertical length of the Preprufe Membrane that extends above the and tuck the Preprufe 160R Membrane behind the 18 in (450 mm) length of Preprufe 300R Membrane, ensuring a minimum 3 in (75 mm) lap.
8. Install Preprufe CJ Tape centered over the lap.
9. Remove release liner and roll tape to ensure good adhesion using steel or vinyl cylindrical and Vee roller.

Special Notes

Ensure Adcor® waterstop is encapsulated with a min. of 3 in (75 mm.) concrete cover. Avoid installing Adcor® waterstop in areas where it may be subjected to prolonged exposure or immersion water prior to concrete placement. A GCP injectable waterstop should be considered if waterstop may be exposed and or immersed in water prior to concrete placement or when access to Adcor® waterstop is limited after installation by rebar. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



NOTE: GCP MAY APPROVE AN ALTERNATE INJECTABLE GCP WATERSTOP BASED ON DESIGN CONDITIONS



BLIND SIDE WALL TO SLAB TIE-IN OPTION - B

PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE-009-B

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 03012015

Tie into Preprufe Wall Waterproofing (Option-B)

Prior to Membrane Installation, Review the Preprufe®
Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during concrete placement. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). Surface should also be free from loose aggregate and sharp protrusions as outlined the Preprufe® Data Sheet section on Surface Preparation.

Detailing

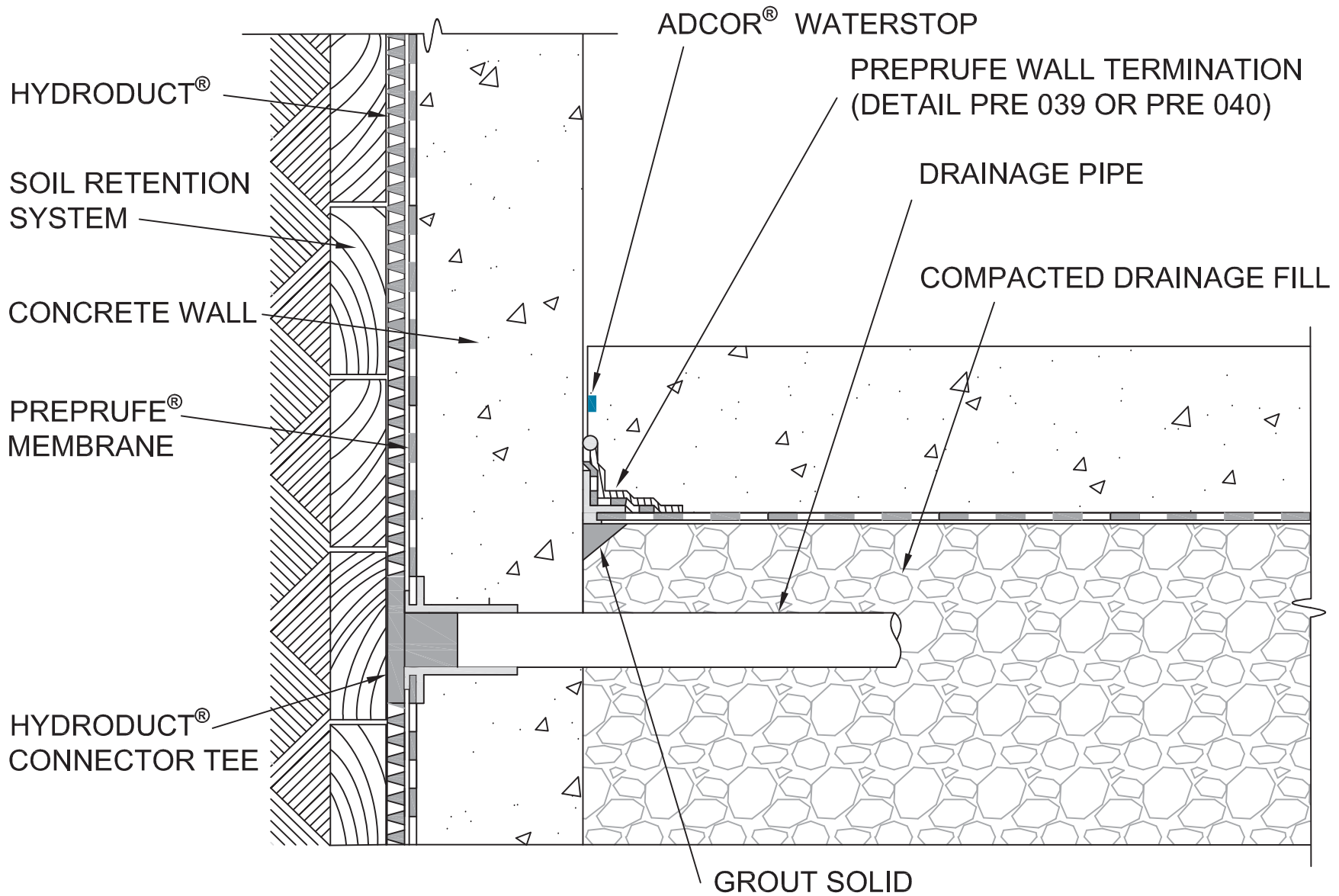
1. Install Preprufe membrane over the mud slab or compacted earth as detailed horizontal and vertical applications on the Preprufe data sheet.
2. Continue onto the vertical surface of the prepared soil retention system a minimum 18 in (450 mm) above the finished elevation of the structural floor slab. It is practice to extend the Preprufe membrane above the height of the rebar from the slab.
3. Apply Preprufe® CJ Tape to the Preprufe membrane centered over the finished elevation of the concrete proposed concrete slab.
4. Secure the top of the membrane to temporarily hold it in place on the vertical substrate. Care should be taken to prevent damage to this exposed membrane concrete back-splash as well as slag from rebar welding in wall forms, by keeping the release liner on and protected with protection board, plywood or other material (See PRE-060)
5. If the exposed membrane above the slab is contaminated with concrete oversplash is the lap area, it must be cleaned down to good material before adhering Preprufe Tape.
6. Install Preprufe membrane over the prepared vertical soil retention system according to standard application instructions on the Preprufe data sheet.
7. Unfasten the vertical length of the Preprufe Membrane that extends above the and tuck the Preprufe 160R Membrane behind the 18 in (450 mm) length of Preprufe 300R Membrane, ensuring a minimum 3 in (75 mm) lap.
8. Install Preprufe CJ Tape centered over the lap.
9. Remove release liner and roll tape to ensure good adhesion using steel or vinyl cylindrical and Vee roller.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Ensure Deneef Injectotube® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Deneef Injectotube® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP injectable waterstop based on design conditions, at GCP's discretion.



NOTE: - INTENDED FOR PROJECTS WITH PERMANENT DEWATERING OR NON-HYDROSTATIC CONDITIONS
 - GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



BELOW SLAB DRAINAGE WITH HYDRODUCT CONNECTOR TEE

PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE-010

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Below Slab Drainage with Hydroduct[®] Connector Tee



Prior to Membrane Installation, Review the Preprufe[®] and Hydroduct Data Sheet

Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than .5 in, 15 mm. The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe[®] Data Sheet section on Surface Preparation.

Detailing

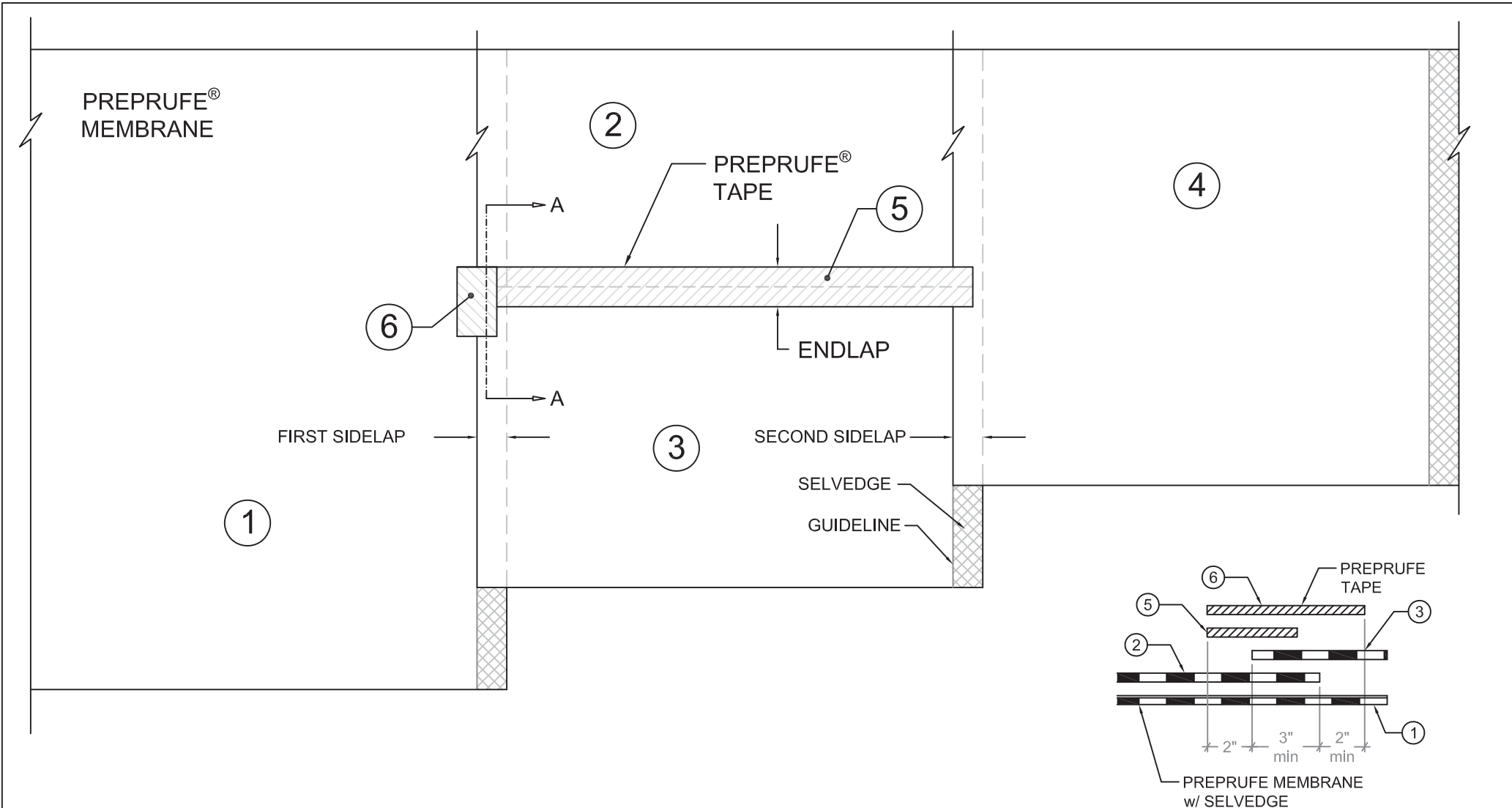
1. Install Preprufe Membrane over the compacted drainage fill as detailed in horizontal applications in the Preprufe data sheet.
2. Install Preprufe Membrane and Hydroduct on the soil retention system as detailed in vertical applications in the Preprufe data sheet.
3. Apply the Hydroduct Connector Tee to the face of the Hydroduct as described in the Hydroduct Coil 600 data sheet.
4. Connect a 4-inch drainage pipe on the connector tee and extend to an appropriate drainage area.
5. Seal all joints of the drainage system with 3 in (75 mm) underground tape.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Ensure Adcor[®] waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor[®] waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



NOTES: - INSTALL PREPRUFE® MEMBRANE AND TAPE IN ORDER AS SHOWN BY NUMBERS
 - DETAIL ALSO APPLICABLE FOR PREPRUFE PLUS

SECTION "A-A"



**END LAP DETAIL FOR WALL OR SLAB - OPTION 1
 TAPE APPLIED AFTER INSTALLATION OF SIDE LAPS
 PREPRUFE® WATERPROOFING SYSTEM**

DRAWING: PRE 031
SCALE: Not to scale
EFFECTIVE DATE: 07/01/2016
SUPERCEDES: 04012015

End Lap Detail for Wall or Slab Option-1



Tape applied after installation of the side laps

Prior to Membrane Installation, Review the Preprufe® Data Sheet

Surface Prep

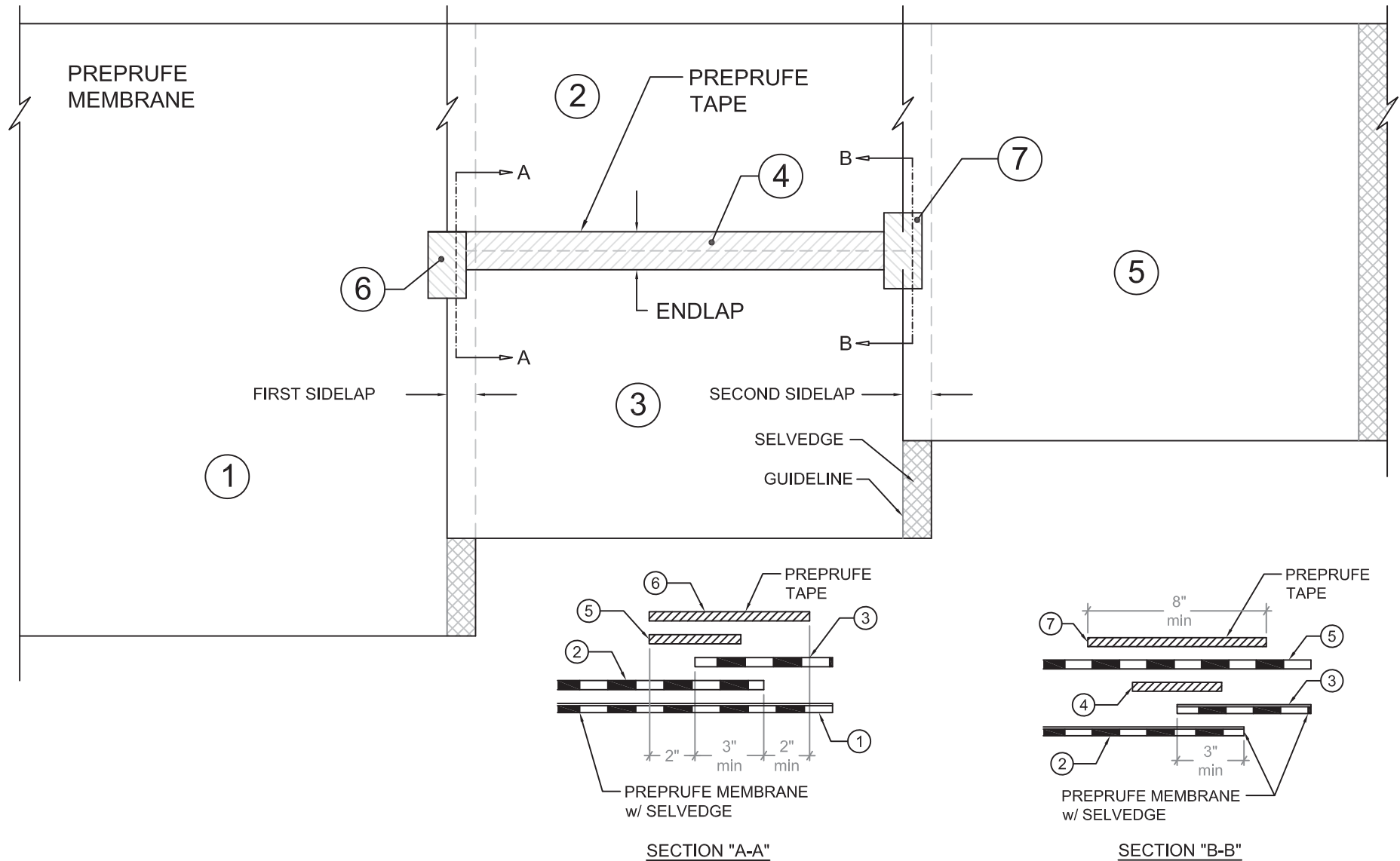
All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than ½ inch. The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Apply Hydroduct® according to Hydroduct Data Sheet.
2. Install Preprufe Membrane and tape in order as shown by numbers.
3. Overlap the ends of the membrane a minimum of 3 in (75 mm) and remove release liner from both membranes.
4. Apply Preprufe Tape over the end lap as shown and roll firmly.
5. Apply tape a minimum of 2 in (50 mm) beyond all edges of membrane that are not sealed by the selvedge.
6. Remove release liner from tape and discard.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.



NOTES: - INSTALL PREPRUFE® MEMBRANE AND TAPE IN ORDER AS SHOWN BY NUMBERS
 - DETAIL ALSO APPLICABLE FOR PREPRUFE PLUS

END LAP DETAIL FOR WALL OR SLAB - OPTION 2
TAPE APPLIED BEFORE INSTALLATION OF 2ND SIDE LAP
PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE 032
SCALE: Not to scale
EFFECTIVE DATE: 07/01/2016
SUPERCEDES: 03012015



End Lap Detail for Wall or Slab Option-2



Tape applied after installation of the side laps
Prior to Membrane Installation, Review the Preprufe®
Data Sheet

Surface Prep

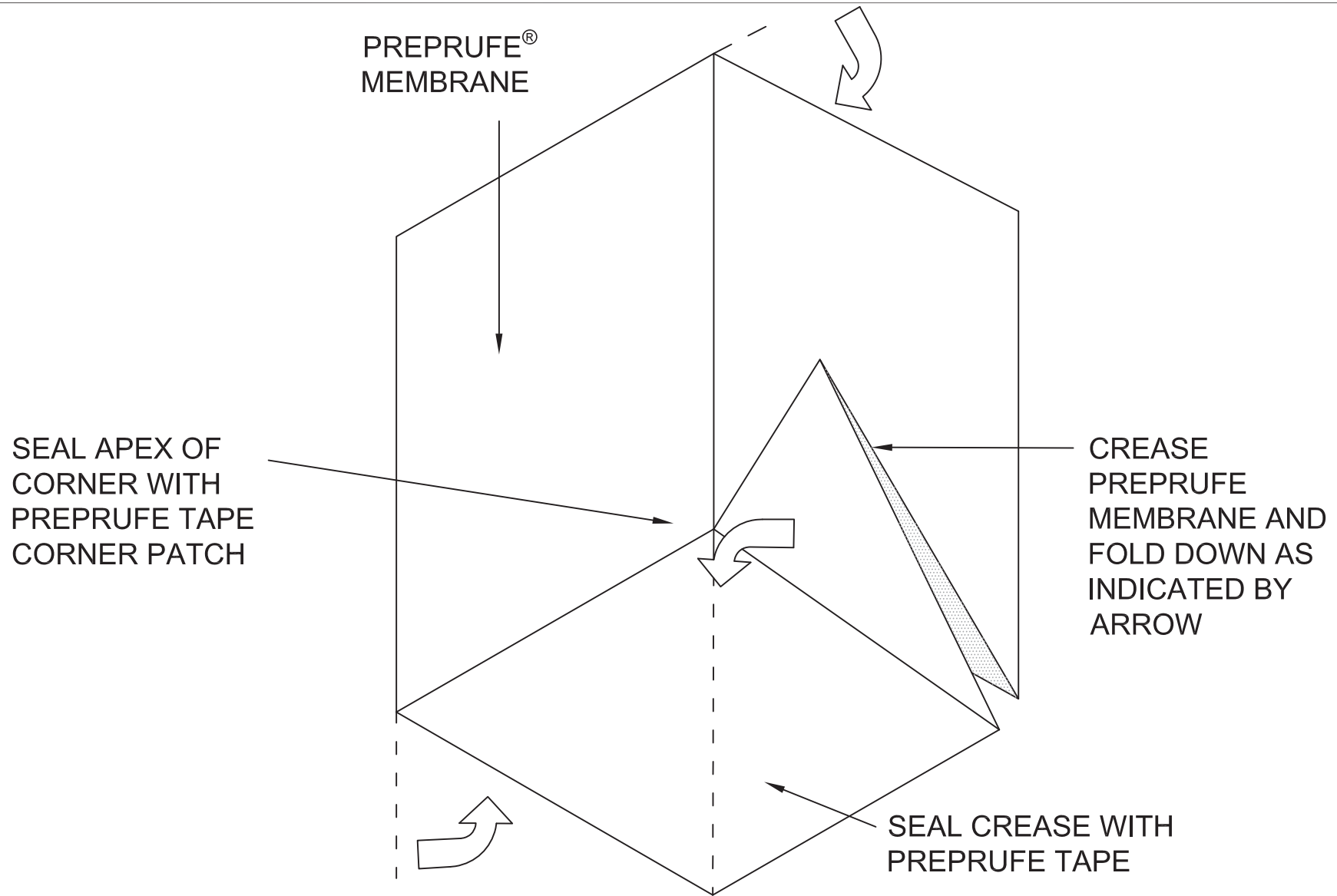
All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in, 15 mm. The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Apply Hydroduct® according to Hydroduct Data Sheet.
2. Install Preprufe Membrane and Preprufe Tape in order as shown by numbers
3. Overlap the ends of the membrane a minimum of 3 in (75 mm) and remove release liner from both membranes.
4. Apply Preprufe Tape over the end lap as shown and roll firmly.
5. Apply tape a minimum of 2 in (50 mm) beyond all edges of membrane that are not sealed by the selvedge.
6. Remove release liner from tape and discard.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.



NOTES: - DO NOT TAPE FOLD ONTO EITHER VERTICAL SURFACE



INSIDE CORNER - CUSTOM FORMED

PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE 033

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 06012010

Inside Corner

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

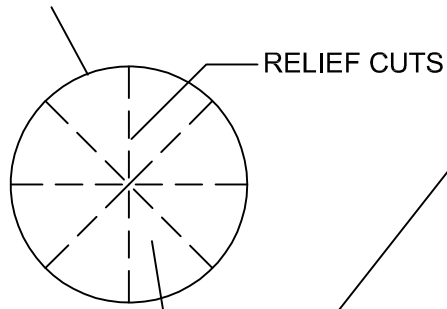
Detailing

1. Precut a square section of Preprufe membrane, Minimum 12 in (300 mm) x 12 in (300 mm).
2. Fold membrane as indicated on detail drawing, with release liner on.
3. Crease the fold with nominal hand pressure to ensure a close fit to the substrate profile and avoid hollows.
4. With the white coating facing towards the concrete, ensure that the apex of the corner is covered and sealed with Preprufe Tape
5. Remove release liner and roll tape firmly using steel or vinyl cylindrical or Vee roller.
6. Seal corner detail to Preprufe field membrane using Preprufe Tape and roll firmly.
7. Apply Hydroduct® according to Hydroduct Data Sheet.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

PENETRATION PROFILE



PIPE PENETRATION

ADCOR[®]
WATERSTOP

PREPRUFE[®] TAPE-
POSITION AT BASE OF
PREPRUFE MEMBRANE
DETAIL PATCH

CONCRETE SLAB

BITUTHENE[®] LIQUID
MEMBRANE (1 in -
25mm. FILLET)

PREPRUFE TAPE

PREPRUFE MEMBRANE
DETAIL PATCH

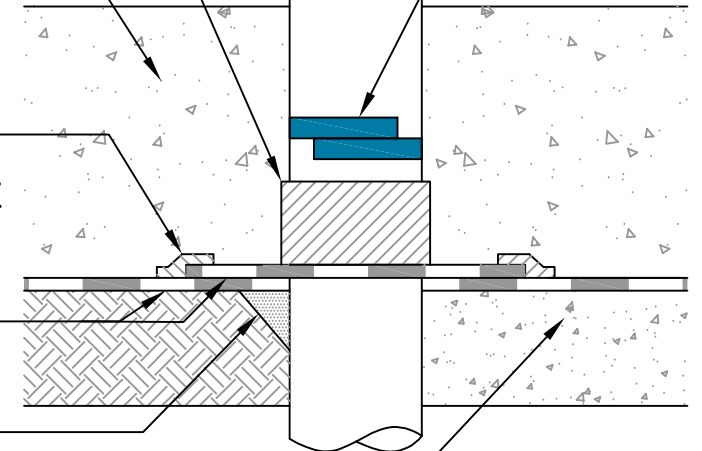
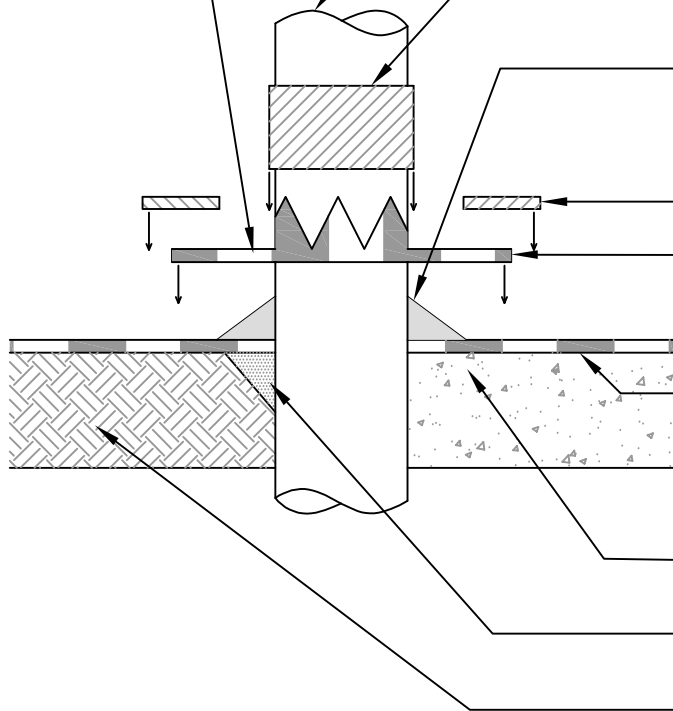
PREPRUFE
MEMBRANE

GROUT SOLID

MUD SLAB

GROUT SOLID

COMPACTED EARTH



ASSEMBLY

FINISHED

NOTE: ALL PENETRATIONS TO BE GROUTED. A MINIMUM OF 6 IN. (150 mm) IS REQUIRED BETWEEN PENETRATIONS TO ENSURE PROPER DETAILING. AVOID PLACEMENT OF MULTIPLE PENETRATIONS.



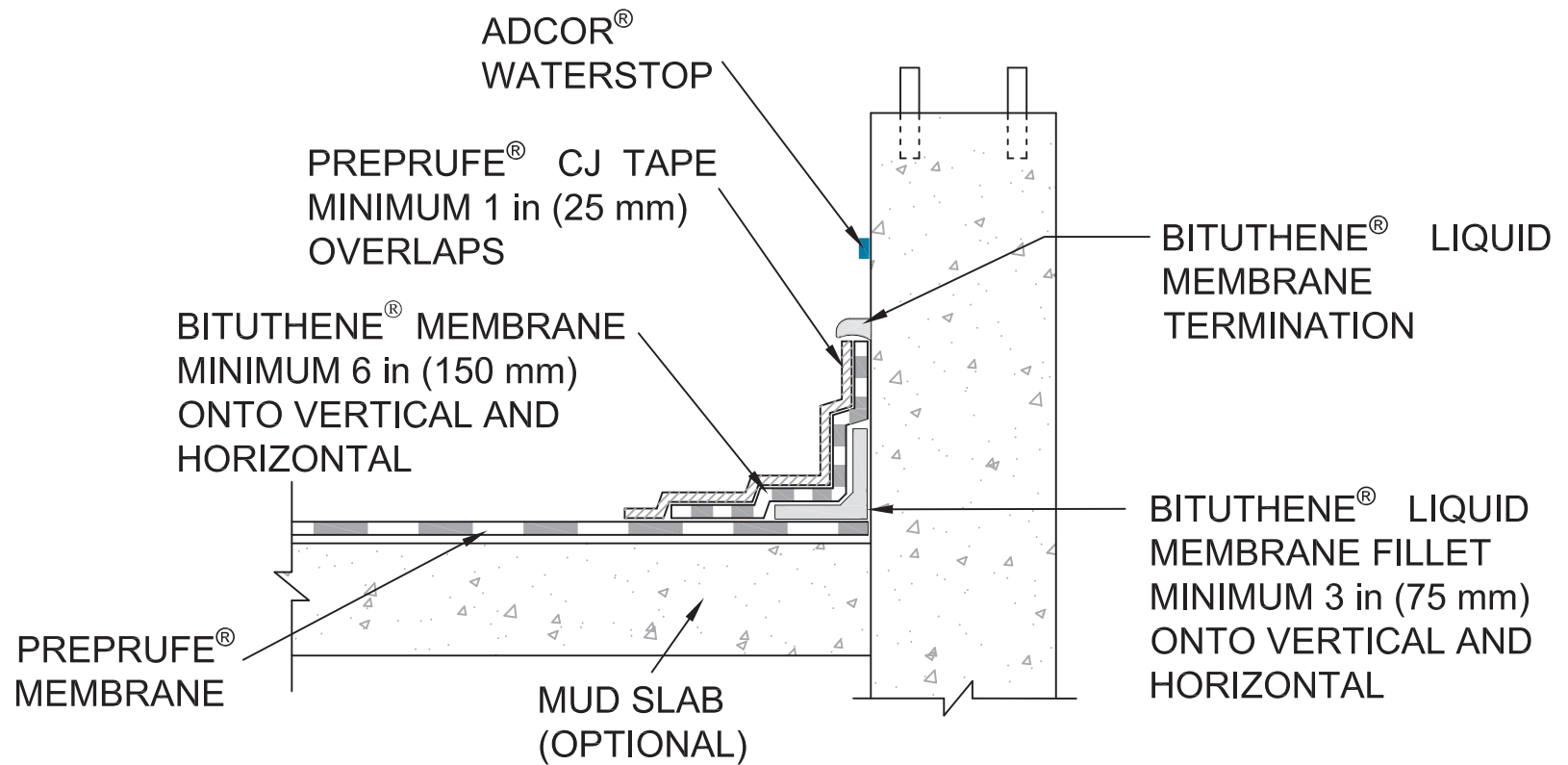
**PIPE PENETRATION FOR
WALL OR SLAB
PREPRUFE[®] WATERPROOFING SYSTEM**

DRAWING: PRE-034

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 06012010



FOOTNOTE: ALL PENETRATIONS TO BE GROUTED.



STRAIGHT EDGE PENETRATION (WHALERS, RAKERS, STEEL H-BEAM) PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE-035

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 06012010

Straight Edge Penetration

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

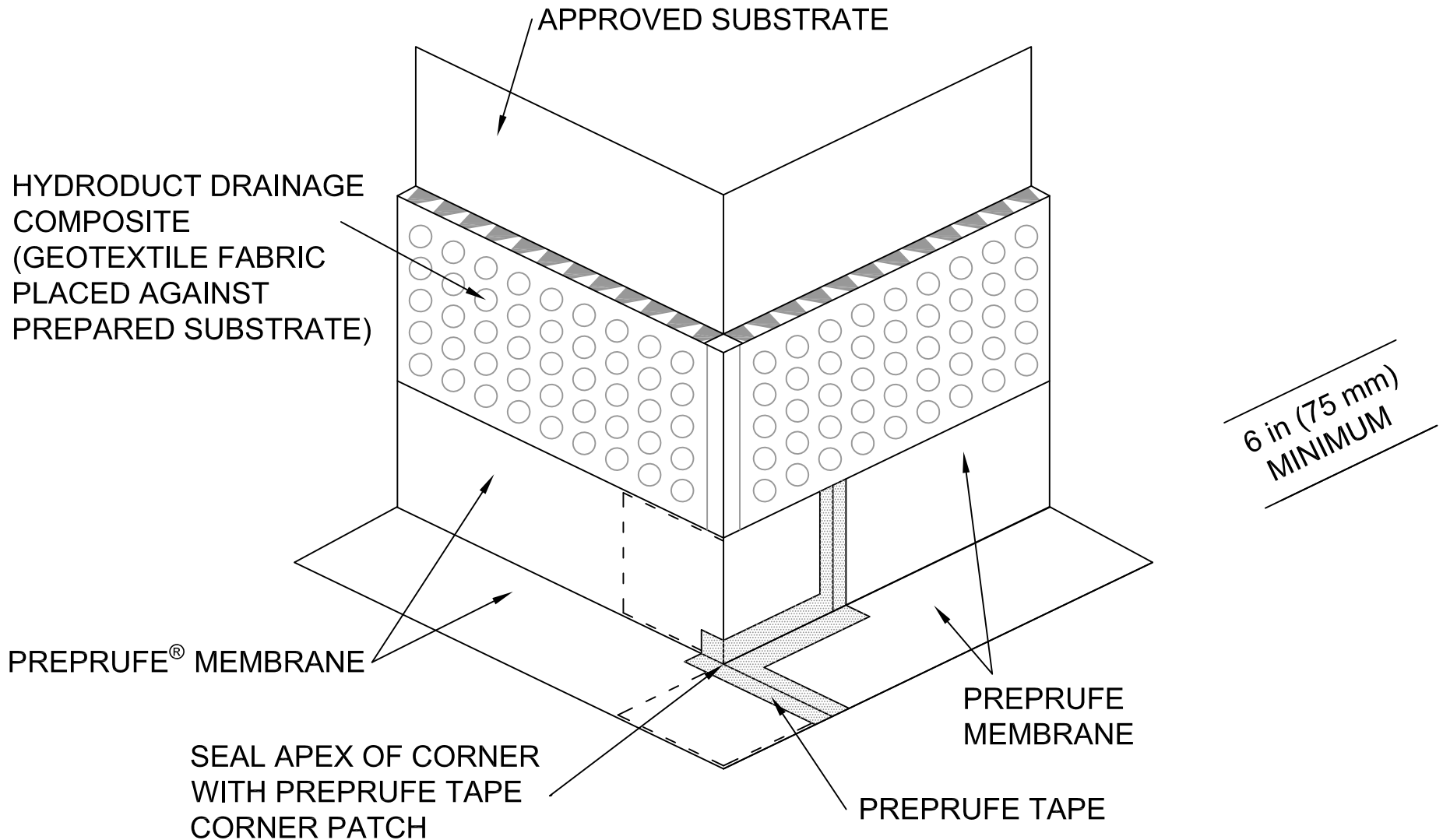
Detailing

1. All penetrations must be firmly secured and stable. Grout around all penetrations that are not stable. Clean loose dust or dirt from the penetration and the surrounding substrate surface using a clean, dry cloth or brush.
2. Cut the Preprufe Field Membrane tight to the penetration and remove release liner.
3. Apply Liquid Membrane to form a minimum 1 in (25 mm) continuous fillet between the Preprufe Membrane and the base of the penetration. Extend a 90-mil (2.2 mm) continuous coating of Liquid Membrane overlapping a minimum of 3 in (75 mm) onto the surface of the Preprufe Membrane and 3 in (75 mm) onto the penetration.
4. Install a minimum 12 in (300 mm) strip of Bituthene Membrane centered over the Liquid Membrane fillet so that the Bituthene Membrane extends 6 in (150 mm) onto the penetration and Preprufe Membrane. For concrete penetrations, apply Bituthene Primer as per standard GCP instructions prior to installation of Bituthene membrane.
5. Apply a strip of Preprufe CJ Tape onto the Bituthene Membrane and overlap onto the Preprufe Field Membrane by a minimum of 2 in (50 mm). Apply a second strip of Preprufe CJ Tape starting at the top leading edge of the Bituthene Membrane and overlap onto the first strip of Preprufe CJ Tape by a minimum of 2 in (50 mm).
6. Terminate the top leading edge of Preprufe CJ Tape and Bituthene Membrane with a bead of Bituthene Liquid Membrane.
7. Seal apex of all outside corners with Preprufe Tape, corner patch as necessary.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Ensure Adcor® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.



OUTSIDE CORNER - CUSTOM FORMED

PREPRUFE® WATERPROOFING SYSTEM

133

DRAWING: PRE 036

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 06012010

Outside Corner

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Fold the Preprufe membrane, ensuring a minimum 6 in (150 mm) return onto the horizontal, to allow tie-in to the Preprufe field membrane.
2. Crease the fold with nominal hand pressure to ensure a close fit to the substrate profile and avoid hollows or draping of the membrane.
3. Make relief cuts in the Preprufe membrane in order to wrap around corner.
4. Seal the relief cuts with Preprufe Tape and ensure that the apex of the corner is covered and sealed with Preprufe Tape.
5. Remove release liner and roll tape to ensure good adhesion using steel or vinyl cylindrical or Vee roller.
6. Apply Hydroduct® according to Hydroduct Data Sheet.

Special Notes

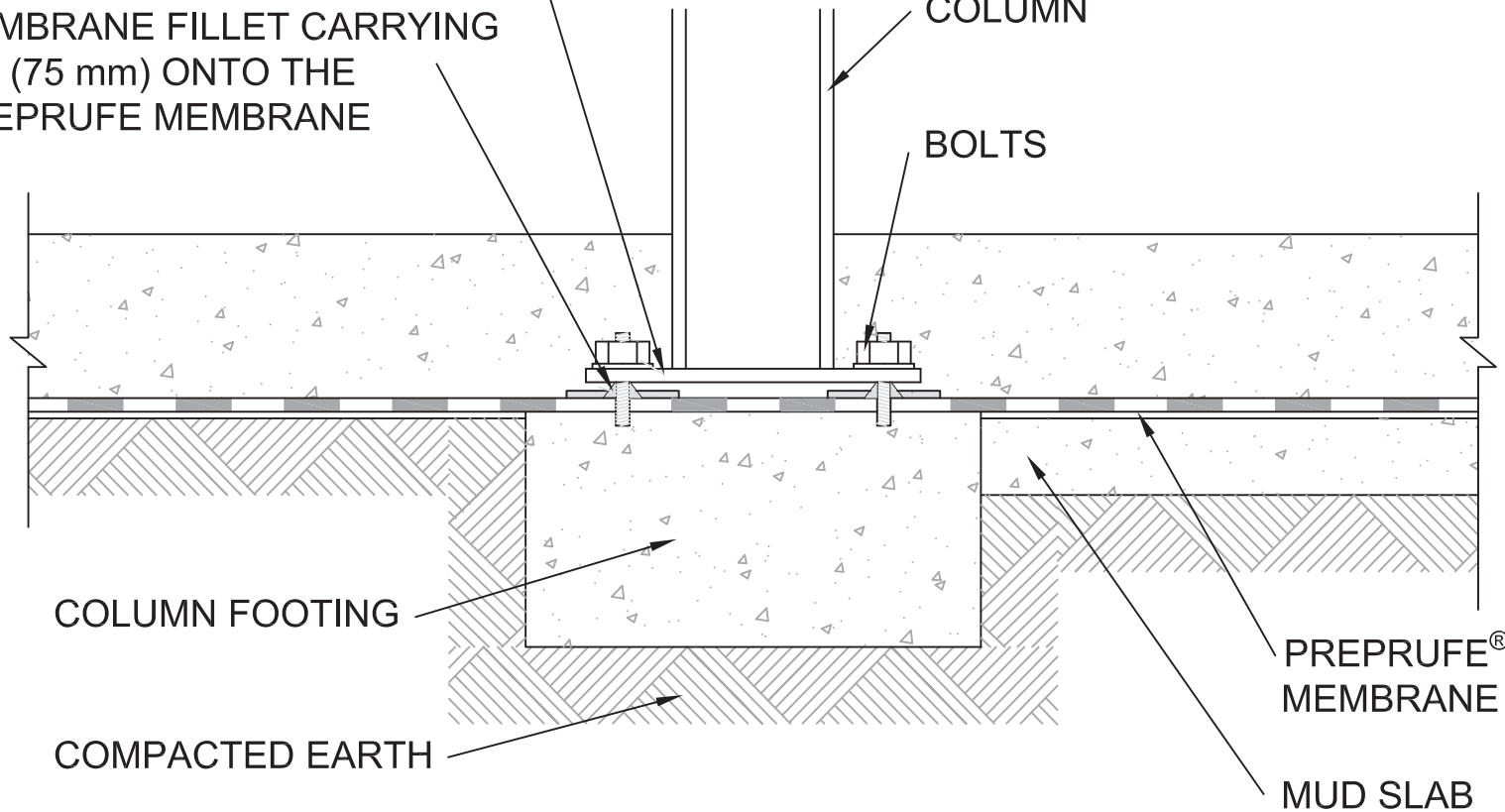
Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

COLUMN BASE

BITUTHENE[®] LIQUID
MEMBRANE FILLET CARRYING
6 in (75 mm) ONTO THE
PREPRUFE[®] MEMBRANE

COLUMN

BOLTS



COLUMN FOOTING

COMPACTED EARTH

PREPRUFE[®]
MEMBRANE

MUD SLAB



COLUMN (OPTION 1)

PREPRUFE[®] WATERPROOFING SYSTEM

135

DRAWING: PRE 037

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 03312007

Column (Option 1)

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

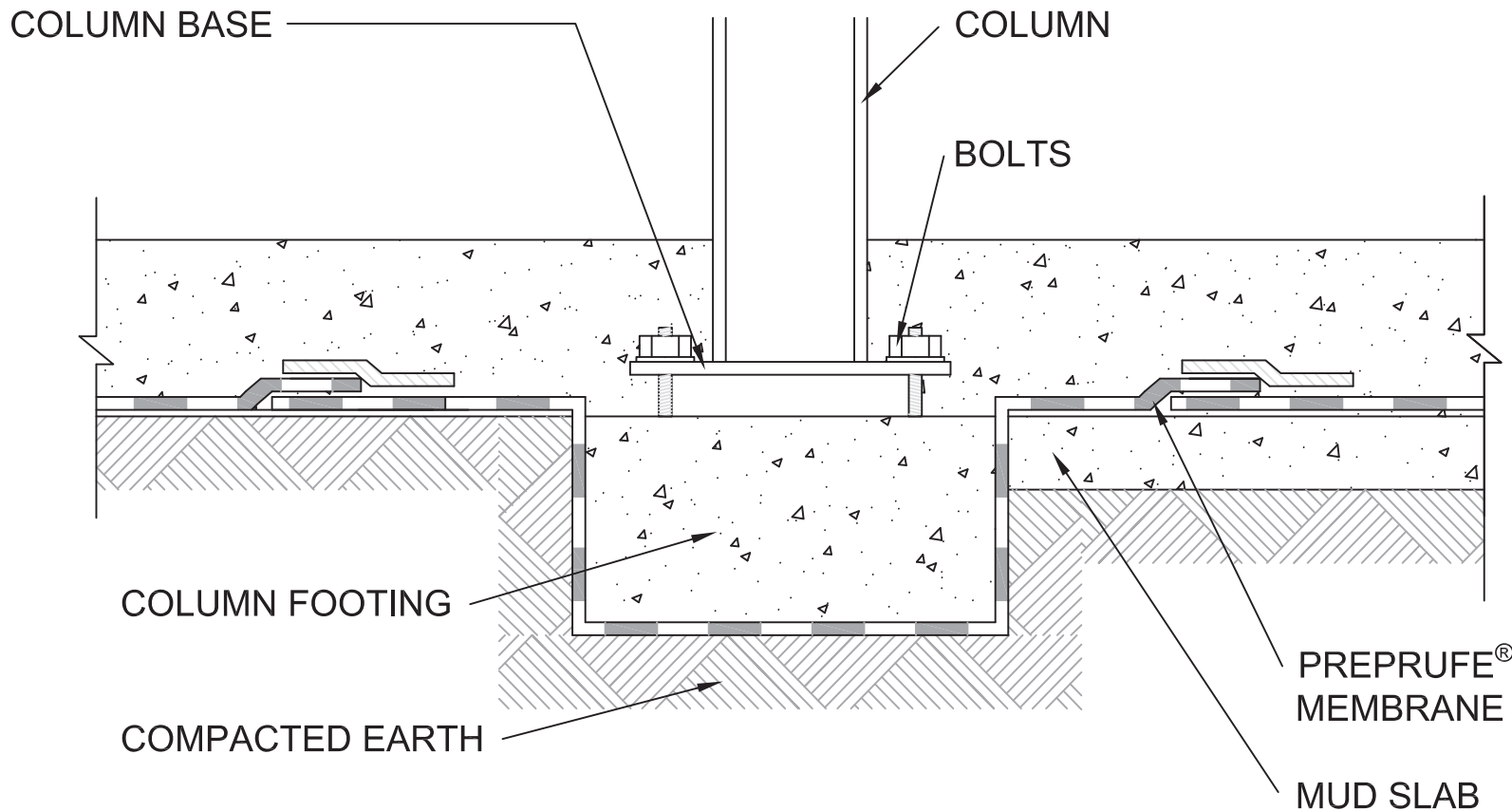
All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Place Preprufe membrane over the column footing and directly under the column.
2. Tie-in penetrations such as rebar and threaded rod that penetrate the membrane should be sealed with Bituthene Liquid Membrane.
3. Cut the membrane tight to the penetration and ensure the penetration is free from rust, dirt, dust, etc.
4. If membrane is not within 0.5 in (15 mm) of penetration, apply Preprufe Tape to cover the gap.
5. Mix and apply Bituthene Liquid Membrane around the penetration.
6. Bituthene Liquid Membrane should be placed to form a minimum 1 in (25 mm) continuous fillet around the penetration at the point of penetration.
7. Bituthene Liquid Membrane should be applied as a 90-mil (2.2 mm) continuous coating overlapping a minimum of 3 in (75 mm) onto the surface of the Preprufe membrane.
8. Apply Hydroduct® according to Hydroduct Data Sheet.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.



**COLUMN
(OPTION 2)
PREPRUFE® WATERPROOFING SYSTEM**

DRAWING: PRE 038

SCALE: Not to scale

EFFECTIVE DATE: 07/1/2016

SUPERCEDES: 03312007

Column (Option 2)

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

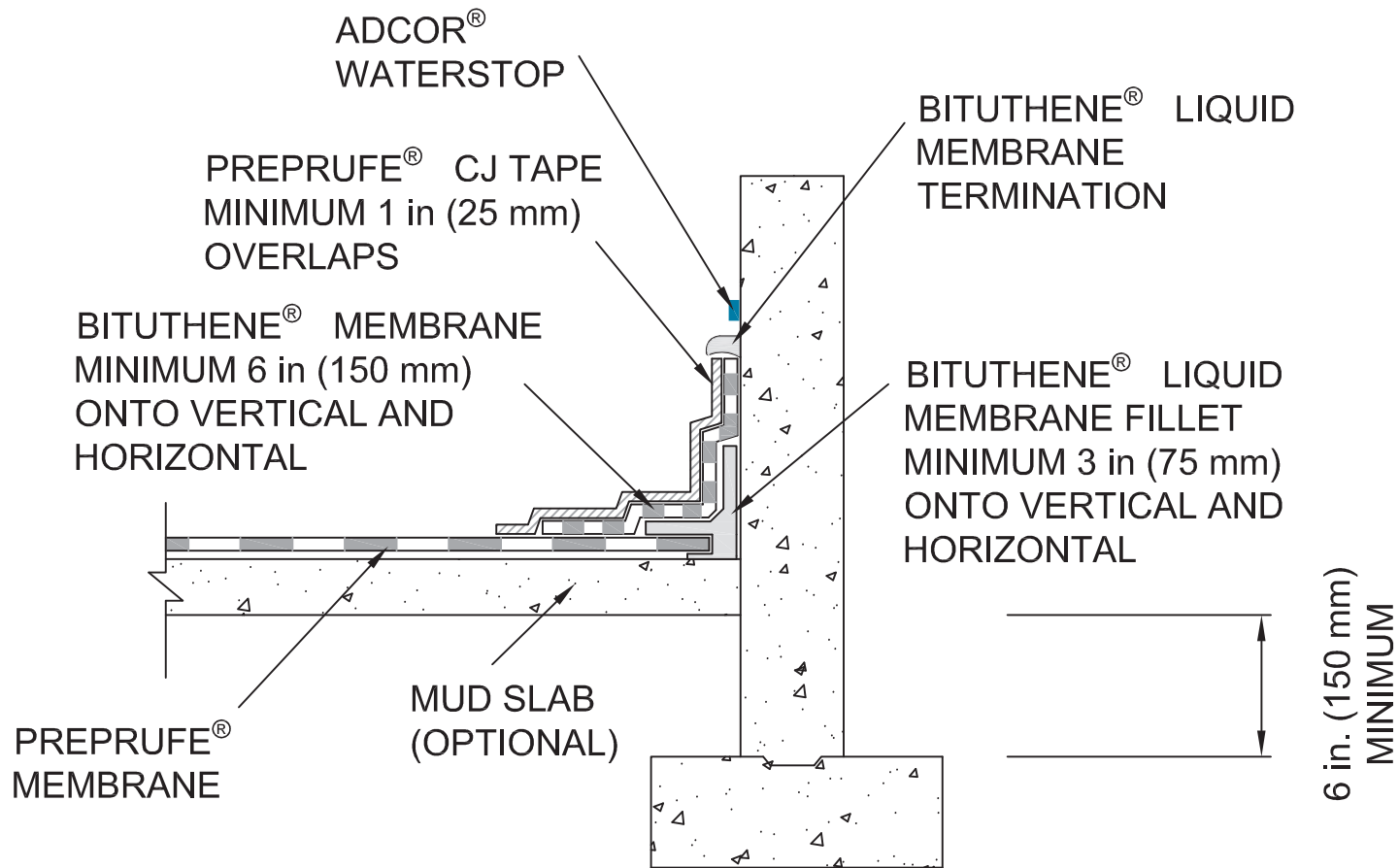
All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Install the membrane following the vertical and horizontal application instructions on the Preprufe data sheet found at www.gcpat.com.
2. Place the Preprufe membrane below the column footing before it is poured.
3. When placing the membrane it is important to leave sufficient length (typically 18 in, 450 mm) of Preprufe 300R beyond the footing to allow for tie-in to the Preprufe membrane that will be laid to waterproof the general slab area.
4. Leave release liner on this extra length and protect it from damage until the tie-in details are completed.
5. Apply Hydroduct® according to Hydroduct Data Sheet.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.



- NOTES - IF A MUDSLAB IS NOT USED, THE SUBSTRATE TO ACCEPT THE BITUTHENE LIQUID MEMBRANE MUST BE GROUTED SOLID TO PROVIDE AN ACCEPTABLE SUBSTRATE FOR THE LIQUID MEMBRANE
- INTENDED FOR PROJECTS WITH PERMANENT DEWATERING OR NON-HYDROSTATIC CONDITIONS
 - GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



Wall Termination for elevated slabs

PREPRUFE[®] WATERPROOFING SYSTEM

DRAWING: PRE-039

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Wall Termination for Elevated Slabs

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

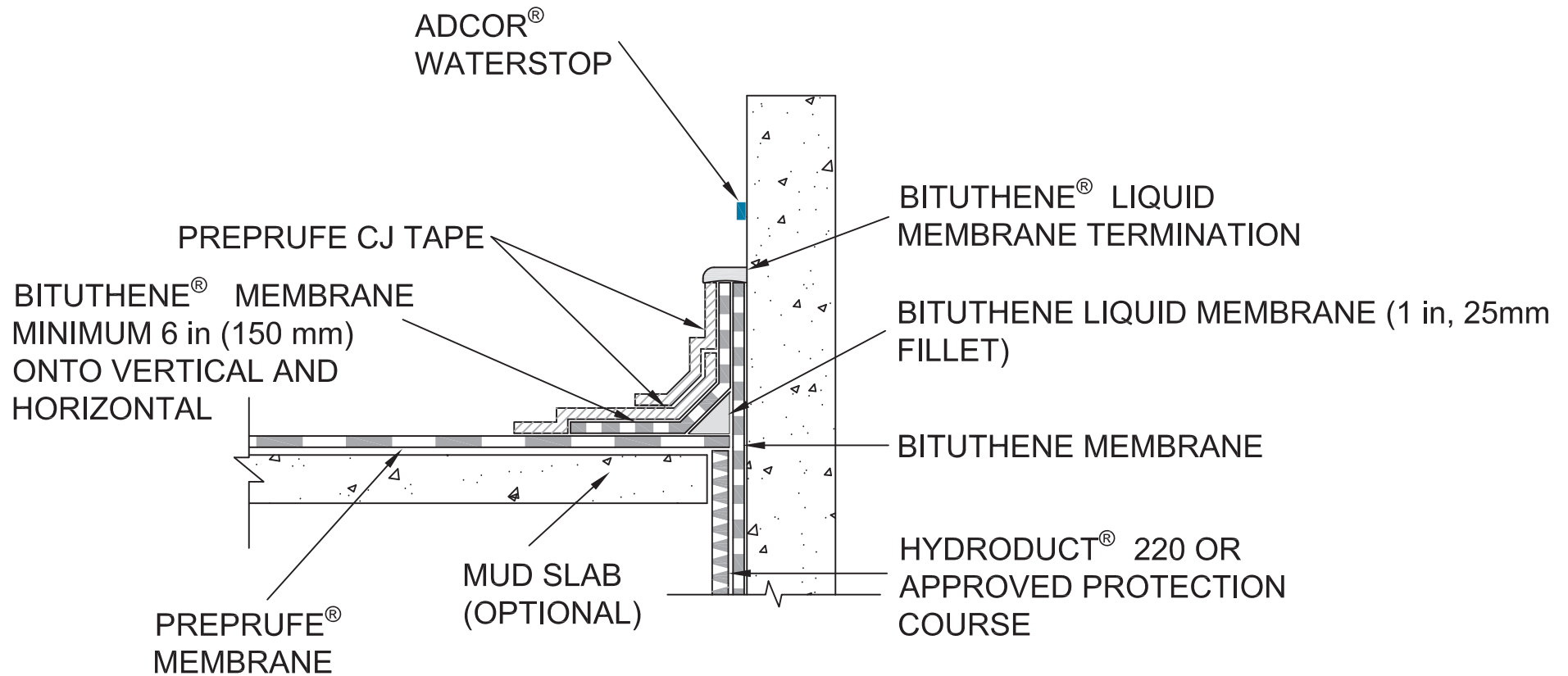
1. Install Preprufe 300R Membrane over mud slab.
2. For compacted earth, proper compaction is required. If the wall area is too small to allow proper compaction, the base of the wall should be grouted solid. Areas to receive Bituthene Liquid Membrane MUST be grouted solid.
3. Apply Bituthene Liquid Membrane on the mud slab from the base of the wall to a minimum of 0.5 in (15 mm) under where the leading edge of the Preprufe Membrane will terminate.
4. Install Preprufe 300R Membrane tight to all vertical and horizontal intersections.
5. Apply Liquid Membrane to form a minimum 1 in (25 mm) continuous fillet between the Preprufe Membrane and the wall. Extend a 90-mil (2.2 mm) continuous coating of Liquid Membrane overlapping a minimum of 3 in (75 mm) onto the surface of the Preprufe Membrane and 3 in (75 mm) onto the wall.
6. Install a minimum 12 in (300 mm) strip of Bituthene Membrane centered over the Liquid Membrane fillet so that the Bituthene Membrane extends 6 in (150 mm) onto the wall and 6 in (150 mm) onto the Preprufe Membrane. Apply Bituthene Primer as per standard GCP instructions prior to installation of Bituthene membrane.
7. Apply a strip of Preprufe CJ Tape onto the Bituthene Membrane and overlap onto the Preprufe Field Membrane by a minimum of 2 in (50 mm). Apply a second strip of Preprufe CJ Tape starting at the top leading edge of the Bituthene Membrane and overlap onto the first strip of Preprufe CJ Tape by a minimum of 2 in (50 mm).
8. Terminate the top leading edge of Preprufe CJ Tape and Bituthene Membrane with a bead of Bituthene Liquid Membrane.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Ensure Adcor® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



- NOTES - IF A MUDSLAB IS NOT USED, THE SUBSTRATE TO ACCEPT THE BITUTHENE LIQUID MEMBRANE MUST BE GROUTED SOLID TO PROVIDE AN ACCEPTABLE SUBSTRATE FOR THE LIQUID MEMBRANE
- GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



Wall Termination to Bituthene® Membrane PREPRUFE® WATERPROOFING SYSTEM

141

DRAWING: PRE-040

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Wall Termination to Bituthene Membrane

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation. Ensure the surface of the Bituthene Membrane is protected during Preprufe installation.

Detailing

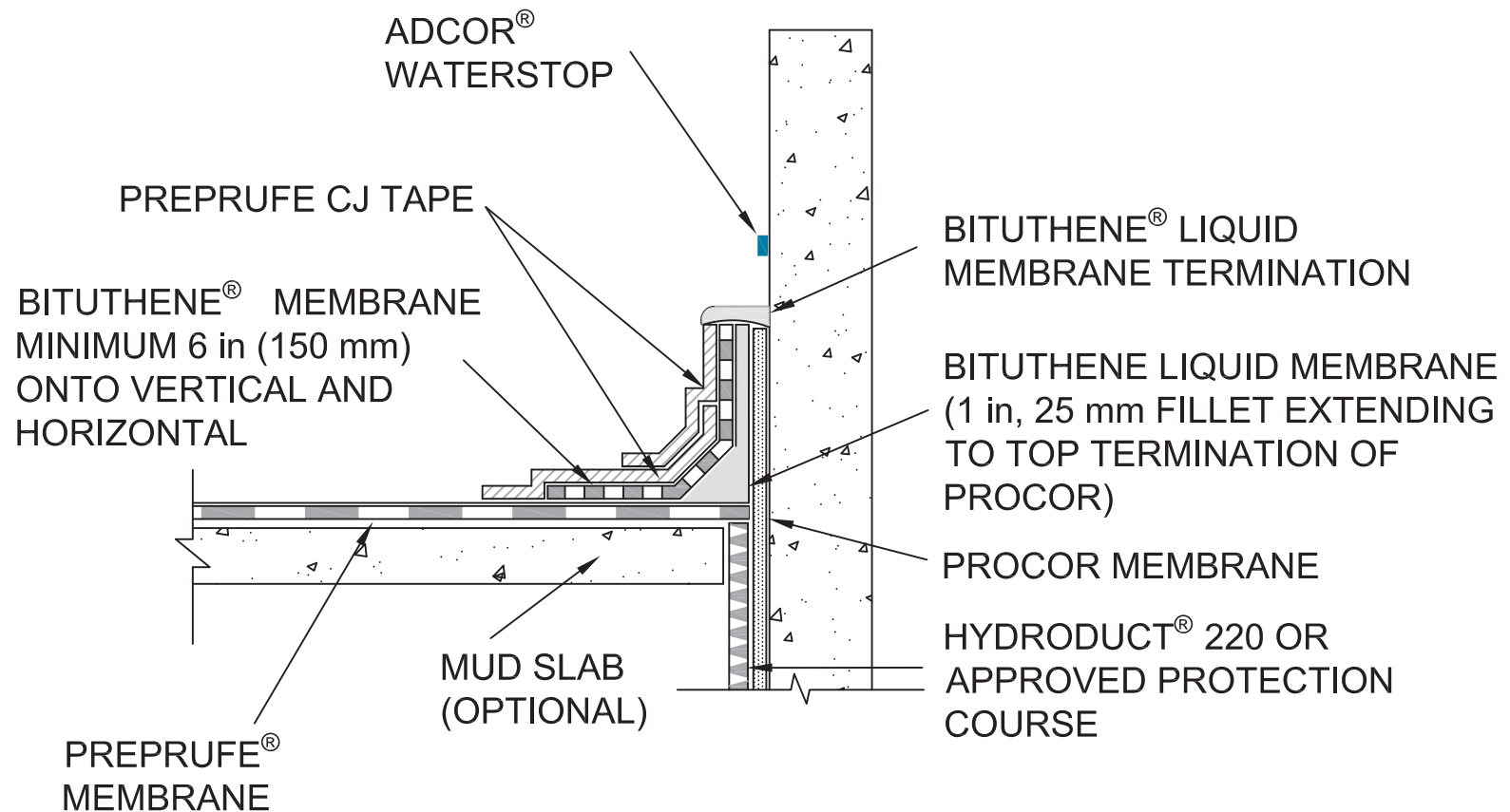
1. Install Preprufe 300R Membrane over the prepared substrate as outlined in the Preprufe data sheet found at graceconstruction.com.
2. For compacted earth, proper compaction is required. If the wall area is too small to allow proper compaction, the base of the wall should be grouted solid.
3. Install Preprufe 300R Membrane tight to all vertical and horizontal intersections.
4. Apply Bituthene Liquid Membrane to form a minimum 1 in (25 mm) continuous fillet between the Preprufe membrane and the Bituthene membrane.
5. Starting a minimum of 4 in (100 mm) from the edge of the Liquid Membrane fillet, apply Preprufe CJ Tape and extend it over the Liquid Membrane fillet and onto the Bituthene Membrane.
6. Apply a second strip of Preprufe CJ Tape, starting at the top leading edge of the Bituthene Membrane and overlap onto the first strip of Preprufe CJ Tape by a minimum of 2 in (100 mm).
7. Terminate the top leading edge of Preprufe CJ Tape and Bituthene Membrane with a bead of Bituthene Liquid Membrane.
8. Roll tape to ensure good adhesion using steel or vinyl cylindrical or Vee roller.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Ensure Adcor® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



- NOTES - IF A MUDSLAB IS NOT USED, THE SUBSTRATE TO ACCEPT THE BITUTHENE LIQUID MEMBRANE MUST BE GROUTED SOLID TO PROVIDE AN ACCEPTABLE SUBSTRATE FOR THE LIQUID MEMBRANE
- GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



Wall Termination to Procormembrane PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE-041

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Wall Termination to Procor Membrane

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation. Ensure the surface of the Procor® Membrane is protected during Preprufe installation.

Detailing

1. Install Preprufe 300R Membrane over the prepared substrate as outlined in the Preprufe data sheet found at www.gcpat.com.
2. For compacted earth, proper compaction is required. If the wall area is too small to allow proper compaction, the base of the wall should be grouted solid.
3. Install Preprufe 300R Membrane tight to all vertical and horizontal intersections.
4. Apply Bituthene® Liquid Membrane to form a minimum 1 in (25 mm) continuous fillet in the corner where the Preprufe and Procor meet. Extend the Bituthene Liquid Membrane vertically to the top leading edge of the Procor Membrane.
5. Starting a minimum of 4 in (100 mm) from the edge of the Liquid Membrane fillet, apply Preprufe CJ Tape and extend it over the Liquid Membrane fillet and onto the Procor Membrane.
6. Apply a second strip of Preprufe CJ Tape starting at the top leading edge of the Procor Membrane and overlap onto the first strip of Preprufe CJ Tape by a minimum of 2 in (50 mm).
7. Terminate the top leading edge of Preprufe CJ Tape and Procor Membrane with a bead of Bituthene Liquid Membrane.
8. Roll tape to ensure good adhesion using steel or vinyl cylindrical or Vee roller.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

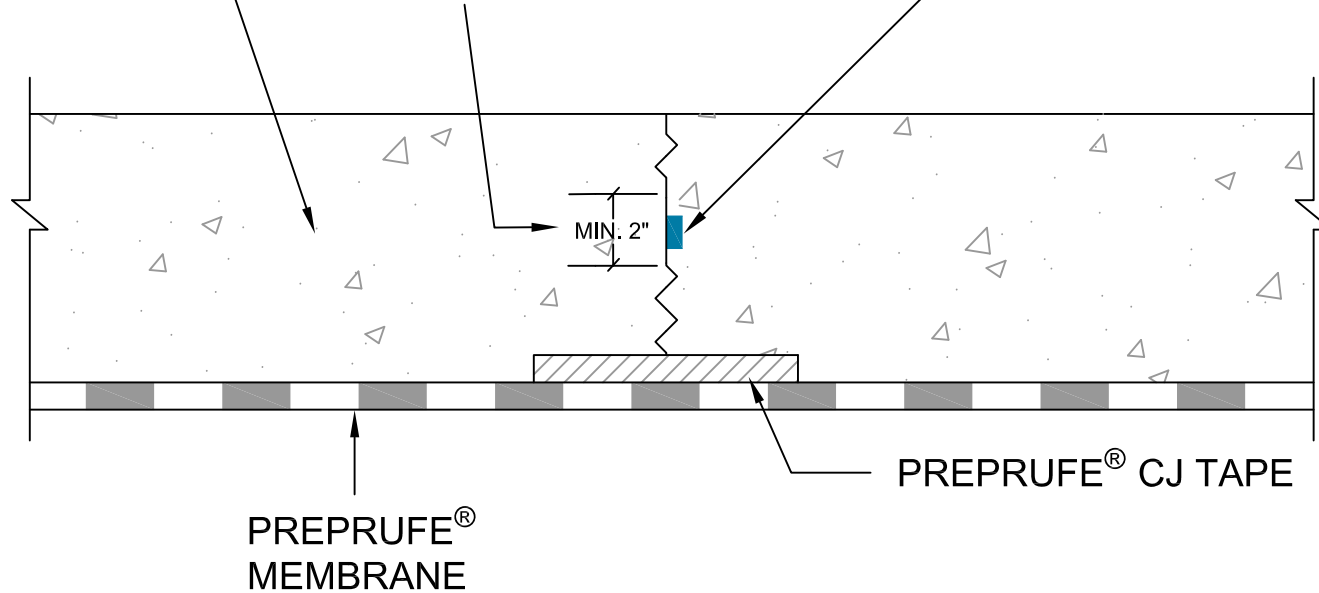
Ensure Adcor® waterstop encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.

CONCRETE SLAB
(SECTION VIEW)
OR
CONCRETE WALL
(PLAN OR SECTION VIEW)

CONSTRUCTION JOINT
(MIN. 2 in, 50 mm. FORMED OR
TOOLED SMOOTH TO RECEIVE
WATERSTOP)

ADCOR® WATERSTOP
(MIN. 3 in, 75 mm CONCRETE
COVER)



NOTE: - GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



**CONSTRUCTION JOINT (OPTION-A)
PREPRUFE® WATERPROOFING SYSTEM**

DRAWING: PRE-042-A

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Construction Joints (Option-A)

Prior to Membrane Installation, Review the Preprufe®
Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Install Preprufe membrane according to standard horizontal and vertical application instructions on the Preprufe data sheet found at www.gcpat.com.
2. Preprufe CJ Tape should be applied to the surface of the Preprufe membrane and centered along the line of all contraction (control) and construction joints.
3. Remove release liner and roll tape to ensure good adhesion using steel or vinyl cylindrical and Vee roller.
4. Ensure and damaged tape or membrane is repaired after removal of formwork or bulkhead.

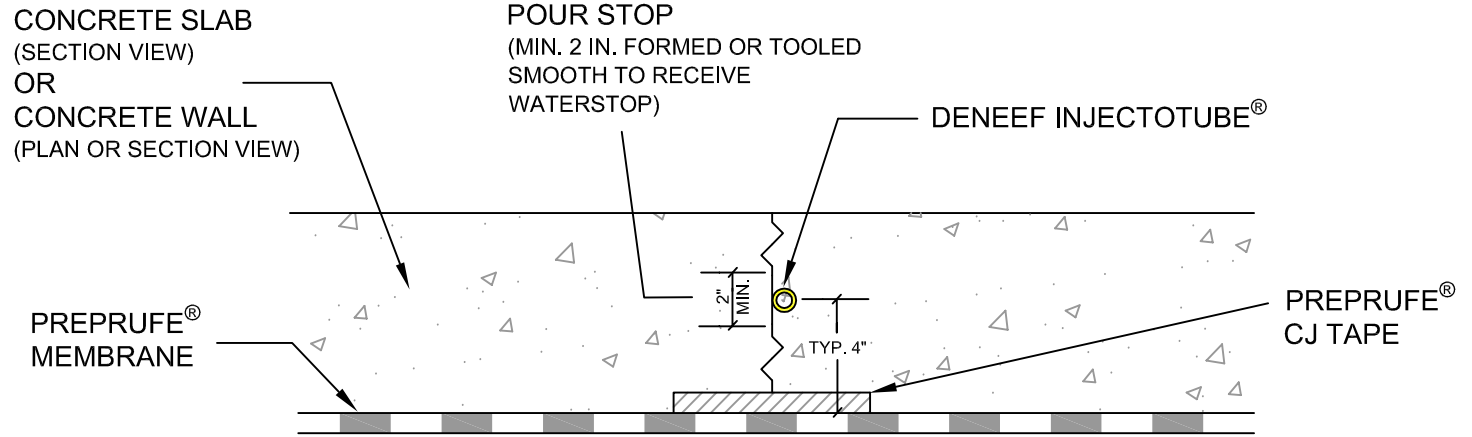
Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

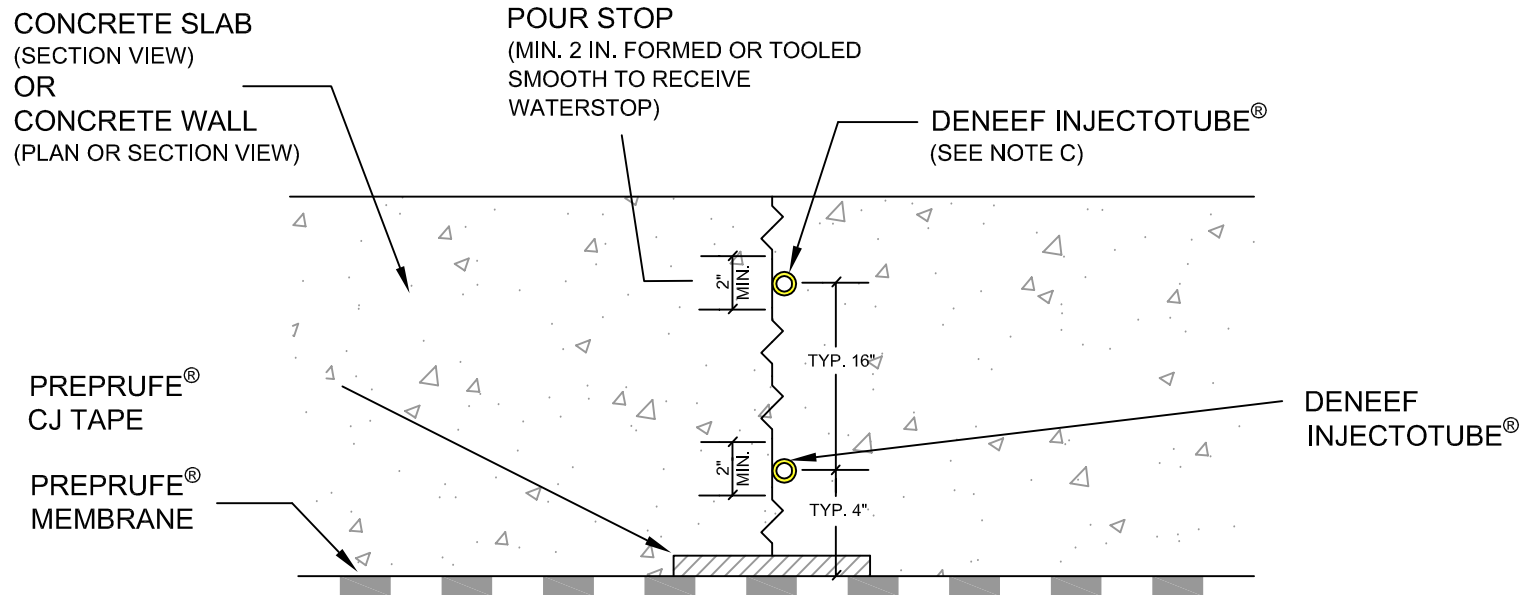
A GCP injectable waterstop should be considered if waterstop may be exposed and or immersed in water prior to concrete placement or when access to Adcor® waterstop is limited after installation by rebar. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.

**FOR SLABS OR WALLS
(LESS THAN 2 FEET THICK)**



**FOR SLABS OR WALLS
(GREATER THAN 2 FEET THICK)**



- NOTES: A. GCP MAY REQUIRE AN ALTERNATE GCP INJECTABLE WATERSTOP BASED ON DESIGN CONDITIONS
 B. POSITION INJECTOTUBE 4 INCHES FROM THE PREPRUFE MEMBRANE
 C. CONCRETE SLABS OR WALLS GREATER THAN 2 FEET IN THICKNESS, AN ADDITIONAL INJECTOTUBE 16 INCHES ABOVE THE FIRST INJECTOTUBE RECOMMENDED
 D. ENSURE INJECTOTUBE HAS A MINIMUM 3 INCHES OF CONCRETE COVER AND SPACING BETWEEN RUNS OF INJECTOTUBE ARE A MIN. OF 12 IN.



**CONSTRUCTION JOINT - (OPTION-B)
PREPRUFE® WATERPROOFING SYSTEM**

DRAWING: PRE-042-B

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: NEW

Construction Joints (Option B)

Prior to Membrane Installation, Review the Preprufe®
Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Install Preprufe membrane according to standard horizontal and vertical application instructions on the Preprufe data sheet found at www.gcpat.com.
2. Preprufe CJ Tape should be applied to the surface of the Preprufe membrane and centered along the line of all contraction (control) and construction joints.
3. Remove release liner and roll tape to ensure good adhesion using steel or vinyl cylindrical and Vee roller.
4. Ensure and damaged tape or membrane is repaired after removal of formwork or bulkhead.

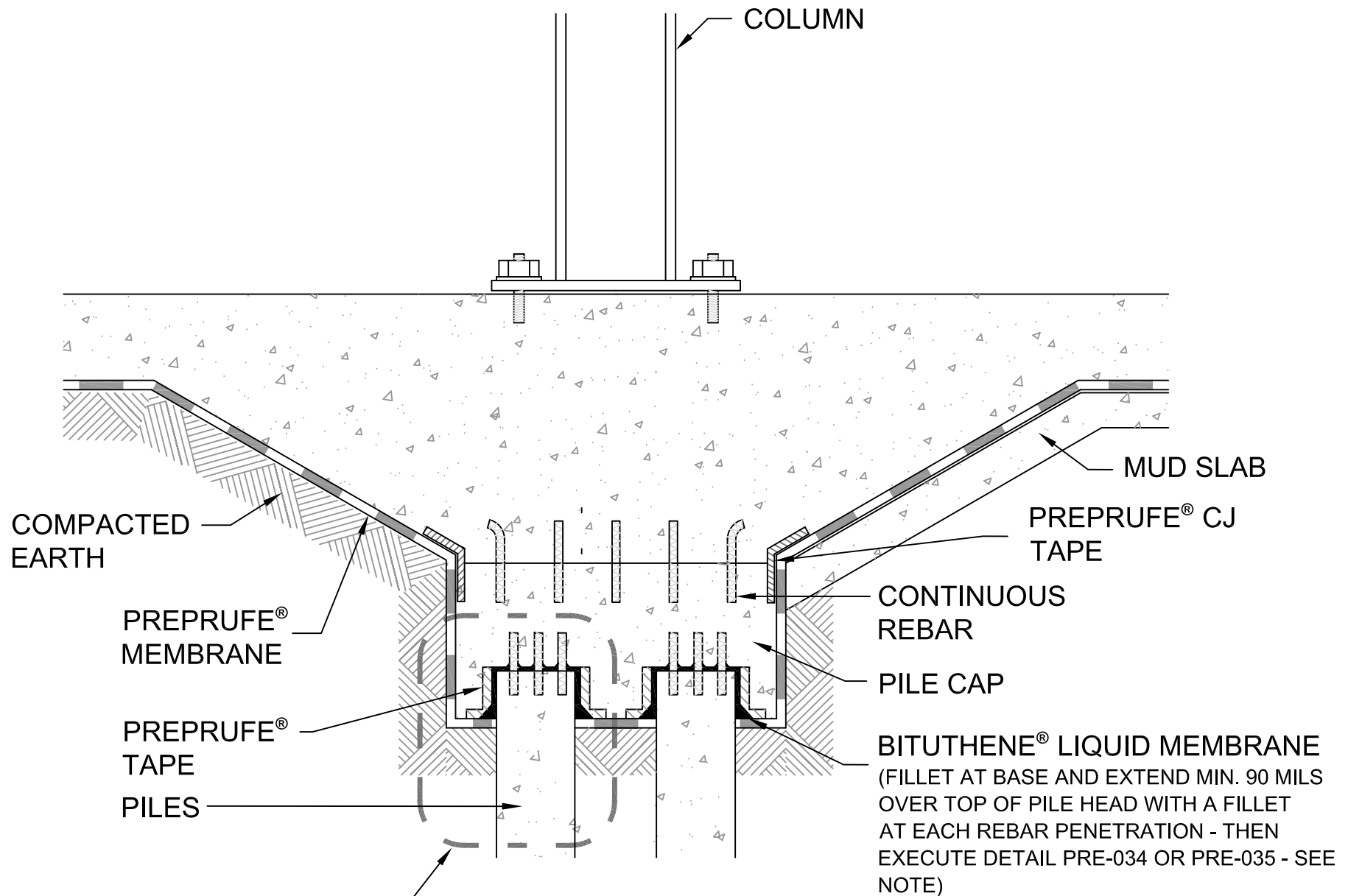
Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Ensure Deneef Injectotube® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Deneef Injectotube® waterstop according to the installation instructions found on the data sheet.

For slab designs that will exceed 24 in (600mm) in thickness, an additional Injectotube installed 16 in (400 mm) above the first Injectotube should be considered.

GCP may require an alternative GCP injectable waterstop based on design conditions, at GCP's discretion.



NOTE: - REFER TO PREPRUFE STRAIGHT EDGE PENETRATION DETAIL PRE035 OR PIPE PENETRATION DETAIL PRE034 BASED ON SHAPE OF PILE



Grade Beam Pile Cap Option 1

PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE 043

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Grade Beam Pile Cap – Option 1

Prior to Membrane Installation, Review the Preprufe®
Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

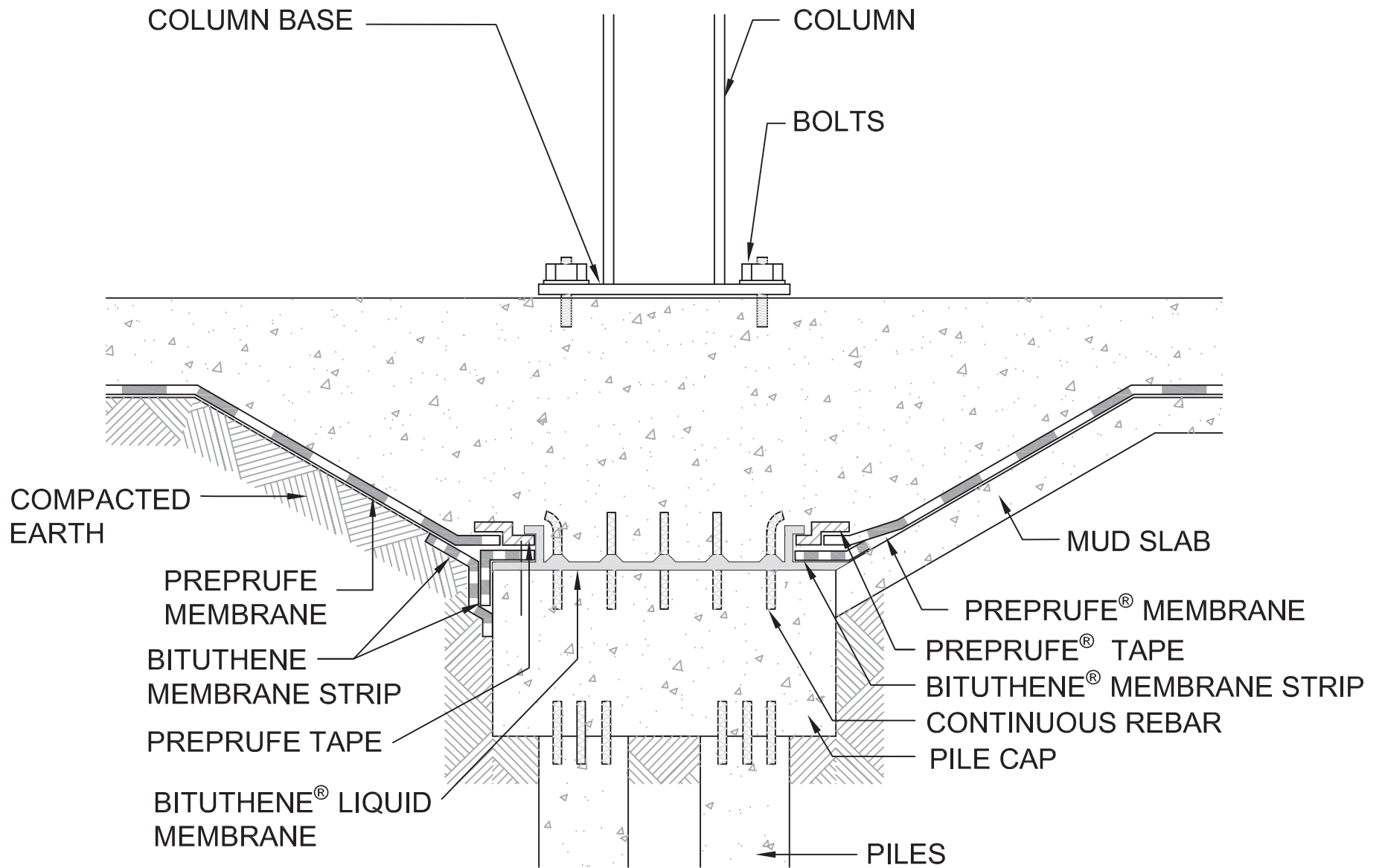
Detailing

1. Install Preprufe Membrane over the prepared substrate in accord with standard installation instructions.
2. Preprufe Membrane is placed in the area formed for the pile cap before the concrete is poured.
3. When placing the membrane it is important to leave sufficient length (typically 12 in, 300 mm) of Preprufe beyond the pile cap area to allow for tie-in to the Preprufe Membrane that will be laid to waterproof the general slab area.
4. Install a continuous 1 in. (25 mm) Bituthene Liquid Membrane fillet around the base of the pile extending up the side and over the top of the pile head at a min. of 90-mils. Each rebar penetration is to be treated with a fillet of Bituthene Liquid Membrane.
5. Cut membrane tight to each pile and complete detail around each pile in accordance with detail PRE-035 instructions.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Piles must extend a minimum of 6 in (150 mm) above the substrate to ensure proper execution of the detail.



Grade Beam Pile Cap Option 2

PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE 044

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Grade Beam Pile Cap – Option 2

Prior to Membrane Installation, Review the Preprufe®
Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. To allow for proper tie-in between Preprufe Field Membrane and pile cap, a 6 in (152 mm) ledge/shelf along the pile cap's perimeter is required.

For Mud slabs

1. Clean loose dust or dirt from the pile cap and mud slab surface using a clean, dry cloth or brush.
2. Apply a continuous 90-mil (2.2 mm) coating of Bituthene Liquid Membrane over the top of the pile cap.
3. Place a 1 in (25 mm) bead of Liquid Membrane around all penetrations at the point of penetration through the pile cap.
4. Prime along the edge of the mud slab a minimum of 6 in (150 mm) from the edge of pile cap with a Bituthene Primer and allow to dry.
5. Align a 9 in (225 mm) strip of Bituthene Membrane centered over the edge of the pile cap. Remove release liner and roll firmly onto the Liquid Membrane and primed mud slab.
6. Install Preprufe Membrane over the prepared substrate and terminate it 2 in (50 mm) onto the pile cap.
7. Apply Preprufe Tape centered over the Preprufe Membrane termination. Remove the release liner and roll firmly.
8. Seal Bituthene Membrane and Preprufe Tape edge with a termination bead of Liquid Membrane.

For Compacted Earth

1. Apply a continuous 90-mil (2.2 mm) coating of Bituthene Liquid Membrane over the top of the pile cap.
2. Place a 1 in (25 mm) bead of Liquid Membrane around all penetrations at the point of penetration through the pile cap.
3. Remove compacted earth away from sides of pile cap and remove formwork. Clean loose dust or dirt from the pile cap surface using a clean, dry cloth or brush.
4. Prime the sides of the pile cap a minimum of 6 in (150 mm) from the top of pile cap with a Bituthene Primer and allow to dry.
5. Align a 9 in (225 mm) strip of Bituthene Membrane centered over the outside edge (outside corner) of the pile cap. Remove release liner and roll firmly onto the Liquid Membrane and primed sides of pile cap.
6. Align a 12 in (300 mm) strip of Bituthene Membrane centered over the outside edge (outside corner) of the pile cap.

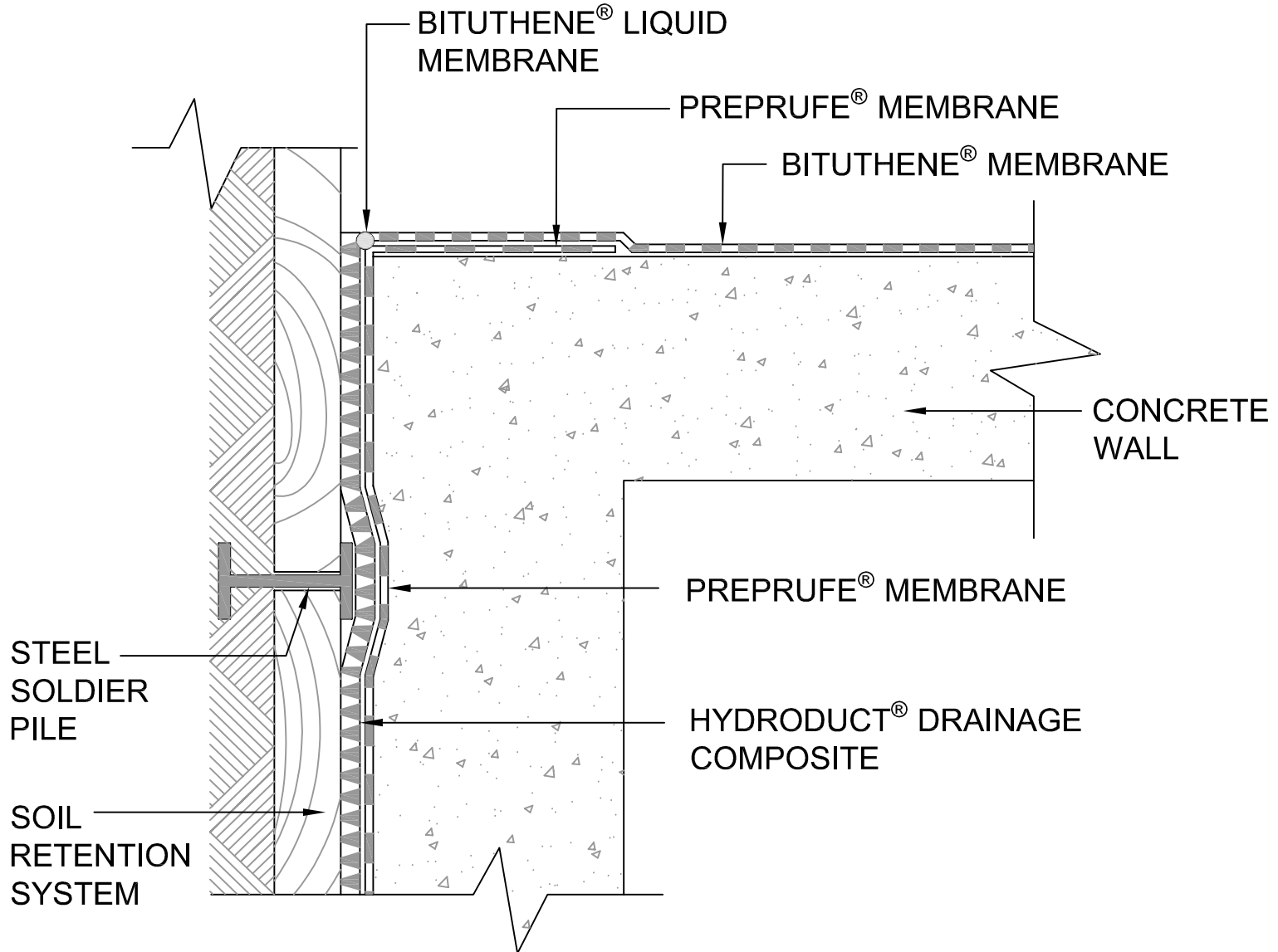
(Continued on next page)

7. Remove half of release liner by removing the RIPCORDER[®]-Split Release on Demand or by scoring release liner along the center of the strip.
8. Roll firmly onto the sides of pile cap with the 9 in (225 mm) strip of Bituthene Membrane and the remaining primed pile cap.
9. Leave the other half of the 12 in (300 mm) strip with the release liner still intact in order to receive the Preprufe Membrane.
10. Replace earth/fill and compact per standard back-filling instructions being careful not to damage the Bituthene strip including the non-bonded portion.
11. Invert the Bituthene strip, and remove the remaining release liner to expose the adhesive portion of the Bituthene.
12. Install Preprufe Membrane over the prepared substrate and terminate it 2 in (50 mm) onto the pile cap.
13. Roll firmly onto the inverted Bituthene strip.
14. Apply Preprufe Tape centered over the Preprufe Membrane termination. Remove the release liner and roll firmly.
15. Seal Bituthene Membrane and Preprufe Tape edge with a termination bead of Liquid Membrane.
16. Apply Hydroduct[®] according to Hydroduct Data Sheet.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

PLAN VIEW



NOTE: HYDRODUCT OR APPROVED PROTECTION COURSE AT BITUTHENE WALL NOT SHOWN FOR CLARITY



Tie into BITUTHENE® Wall
Waterproofing - Plan View
PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE 045

SCALE: Not to scale

EFFECTIVE DATE: 03/23/2020

SUPERCEDES: 07/01/2016

Tie into Bituthene[®] Wall Waterproofing

Prior to Membrane Installation, Review the Preprufe[®] Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe[®] Data Sheet section on Surface Preparation.

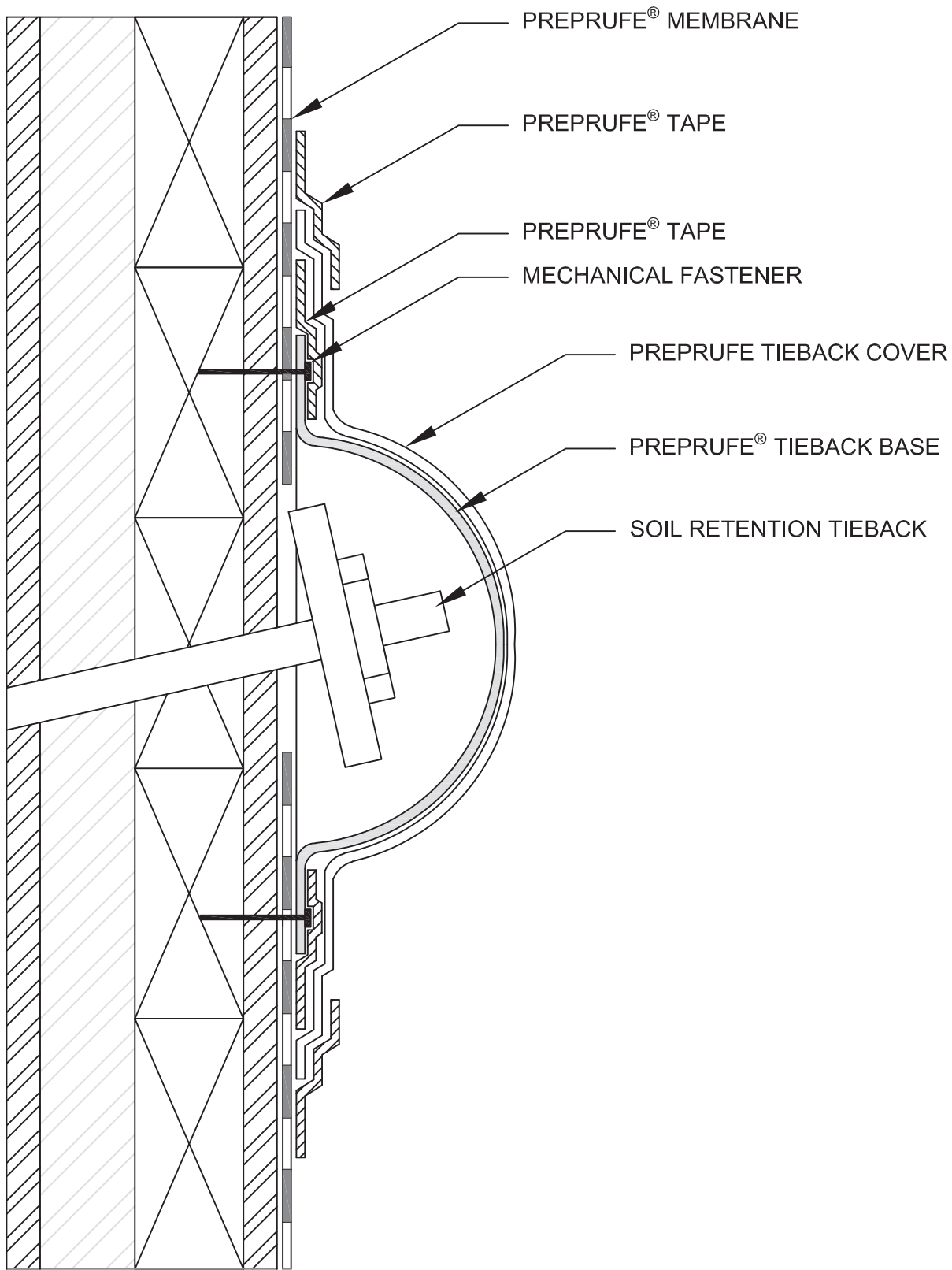
Detailing

1. Install Preprufe 160R over the prepared vertical surface.
2. Extend the Preprufe 160R Membrane 6 in (150 mm) beyond the end of the blind-side wall.
3. As the foundation wall formwork is installed, fold the 12 in (300 mm) piece of Preprufe 160R Membrane to form a sharp corner.
4. Secure it to the inside face of the exterior form panel using Hydroduct Tape or small head fasteners located close to the outer edge of the membrane.
5. Once the wall is poured and cured for seven days, remove the formwork and install the post applied waterproofing according to the manufacturers' standard installation procedures.
6. Apply Hydroduct[®] according to Hydroduct Data Sheet.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Provide temporary protection for Preprufe at the tie-in location until the Bituthene tie-in is installed. The tie-in should be completed and backfilled as soon as possible.



PREPRUFE® TIEBACK COVER
PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE 046

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Preprufe Tie-Back Cover

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Install Preprufe Membrane within 2 in (50 mm) of tieback as per standard installation instructions.
2. Center the base over tieback head and secure base to soil retention system using appropriate fasteners. Fasteners should have a low profile head.
3. Apply Preprufe Tape centered over the edge of the base flange and roll firmly to form a tight seal. Remove release liner and discard.
4. Position the membrane cover over the base taking care to ensure the cover flange sits flat onto the Preprufe Membrane.
5. Apply Preprufe Tape centered over the edge of the cover flange and roll firmly to form a tight seal. Remove release liner and discard.
6. All Preprufe Tape should overlap onto surfaces of tape, membrane, base, cover, etc. a minimum of 2 in (50 mm).
7. Apply Hydroduct® according to Hydroduct Data Sheet.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Preprufe Tieback Cover Supply

Sizes: 6 in. and 8 in.

Set: 1 ABS Base and 1 Membrane Cover (10 sets/carton)

Weight per carton: 30 lbs

Note: Remove release liner prior to installation

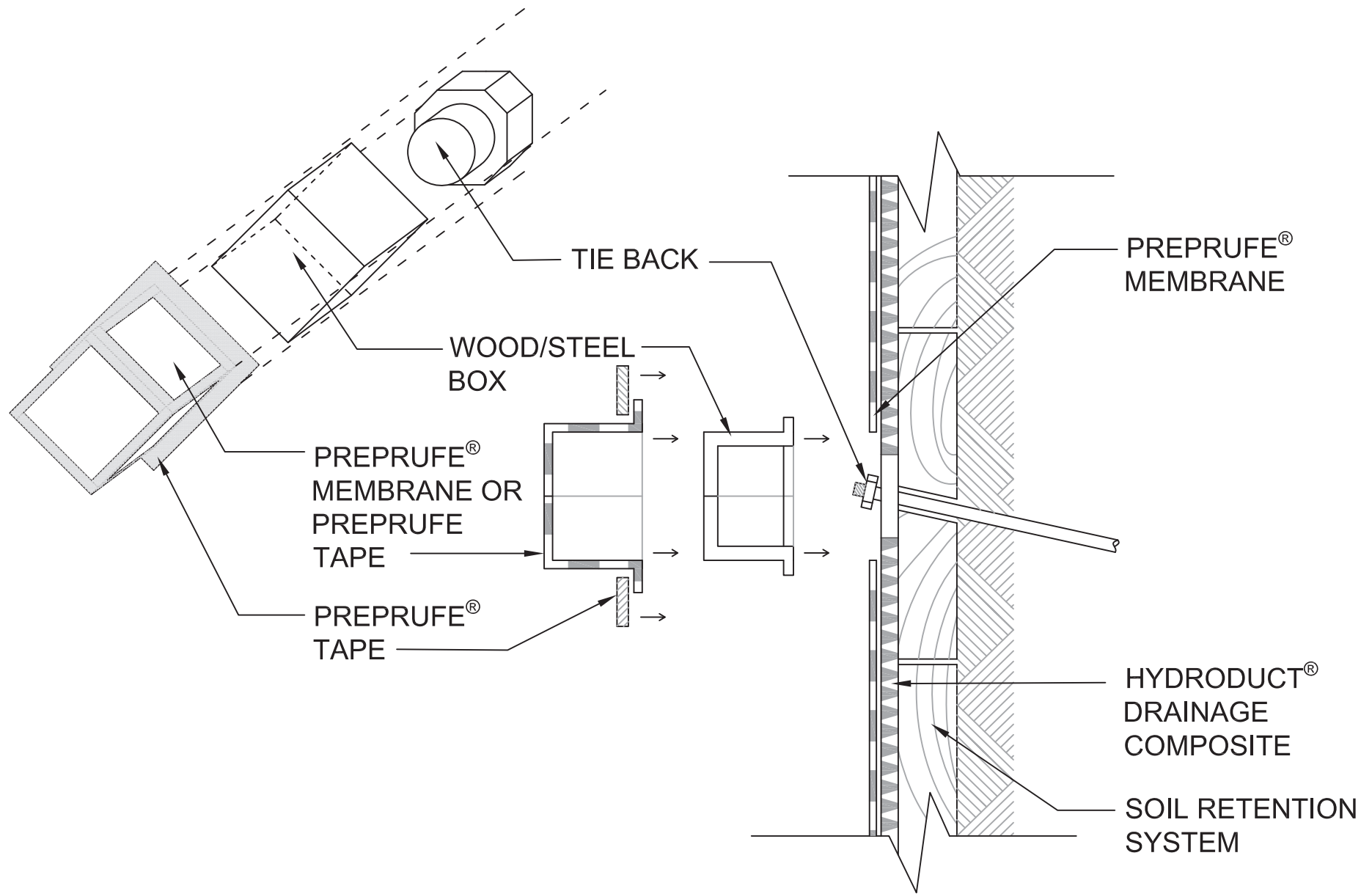
Preprufe Tieback Cover Dimensions

8 in. Size:

- Tieback anchor assembly maximum projection from face of wall is 8 in.
- To allow a 4 in. concrete cover, the minimum concrete wall thickness is 12 in.
- Tieback head plate maximum size of 8 in. x 8 in. x 2 in. for either cable or rod type anchors.

6 in. Size:

- Tieback anchor assembly maximum projection from face of wall is 6 in.
- To allow a 4 in. concrete cover, the minimum concrete wall thickness is 10 in.
- Tieback head plate maximum size of 8 in. x 8 in. x 2 in. for either cable or rod type anchors.



NOTE: FOR USE WHEN PREPRUFE TIE-BACK COVER IS NOT VIABLE



Soil Retention Tie-Back Custom Box Cover

PREPRUFE[®] WATERPROOFING SYSTEM

DRAWING: PRE 047

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Soil retention Tie-Back Box Cover

Prior to Membrane Installation, Review the Preprufe®
Data Sheet



Surface Prep

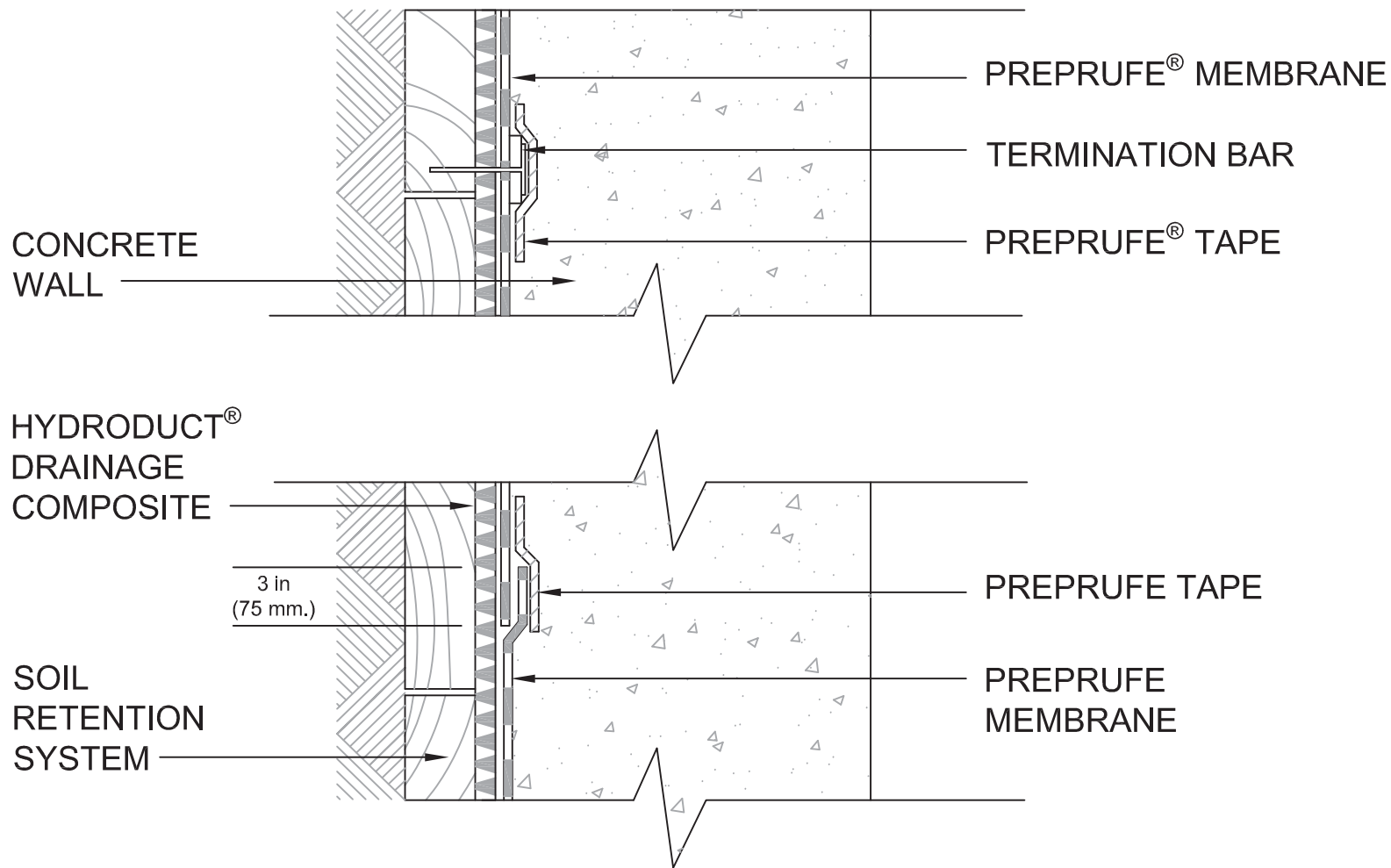
All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Install Preprufe Membrane within 2 in (50 mm) of tieback as per standard installation instructions.
2. Cover the tieback head with a box constructed of wood, steel or other material that will provide a sound, stable and smooth substrate for the Preprufe.
3. Position the custom cover to allow concrete to shed during placement and to improve consolidation.
4. Firmly secure the cover to the soil retention system.
5. Apply Preprufe CJ Tape and/or Preprufe Tape over the box providing a continuous layer of tape that overlaps onto the field membrane by a minimum of 3 in (75 mm). Remove the release liners and apply Preprufe Tape centered over all outside edges and corners of box to provide a double layer at edges and corners.
6. Roll firmly and remove release liner.
7. Apply Hydroduct® according to Hydroduct Data Sheet.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.



TOP TERMINATION AND END LAP

PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE 048

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Top Termination and End Lap

Prior to Membrane Installation, Review the Preprufe®
Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

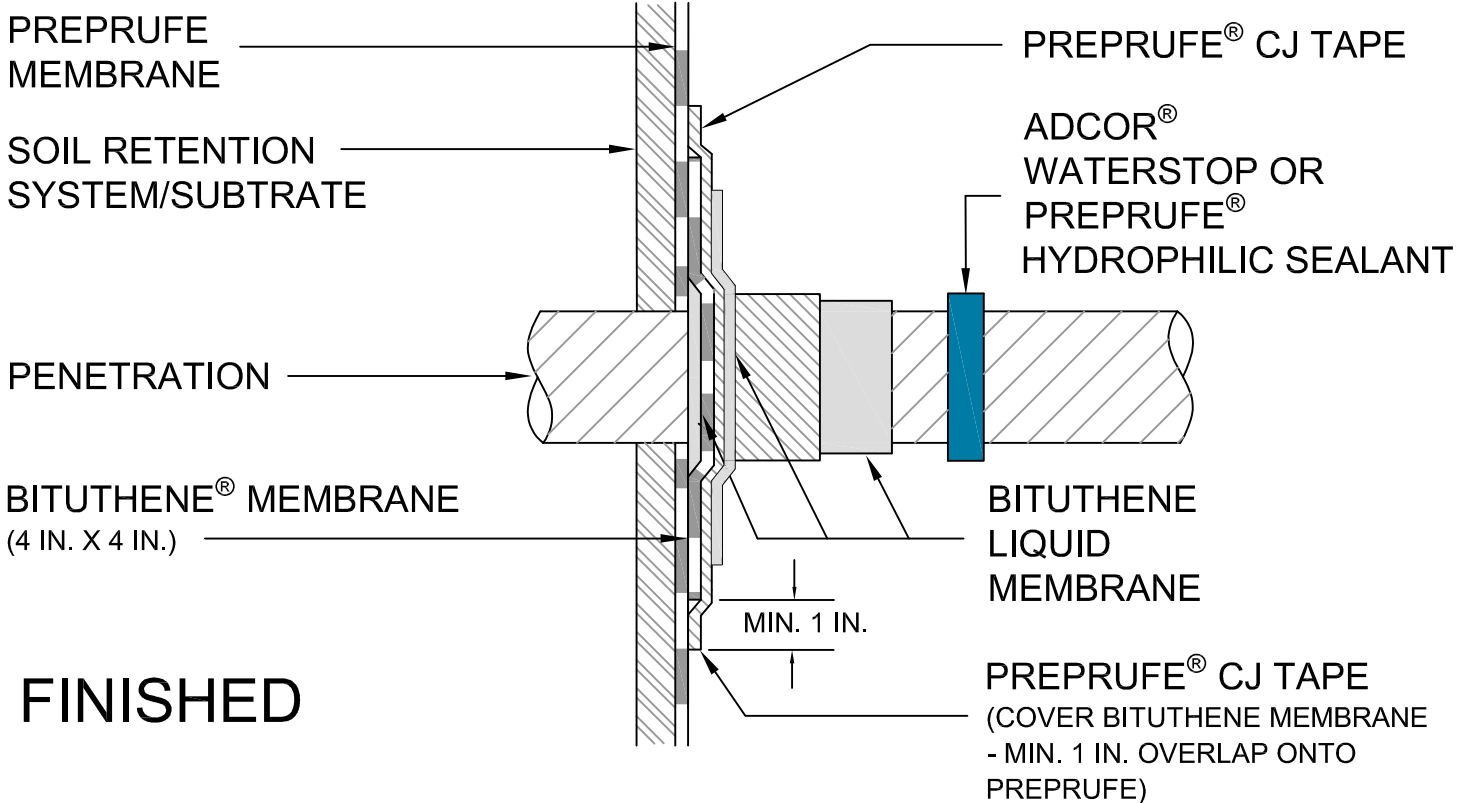
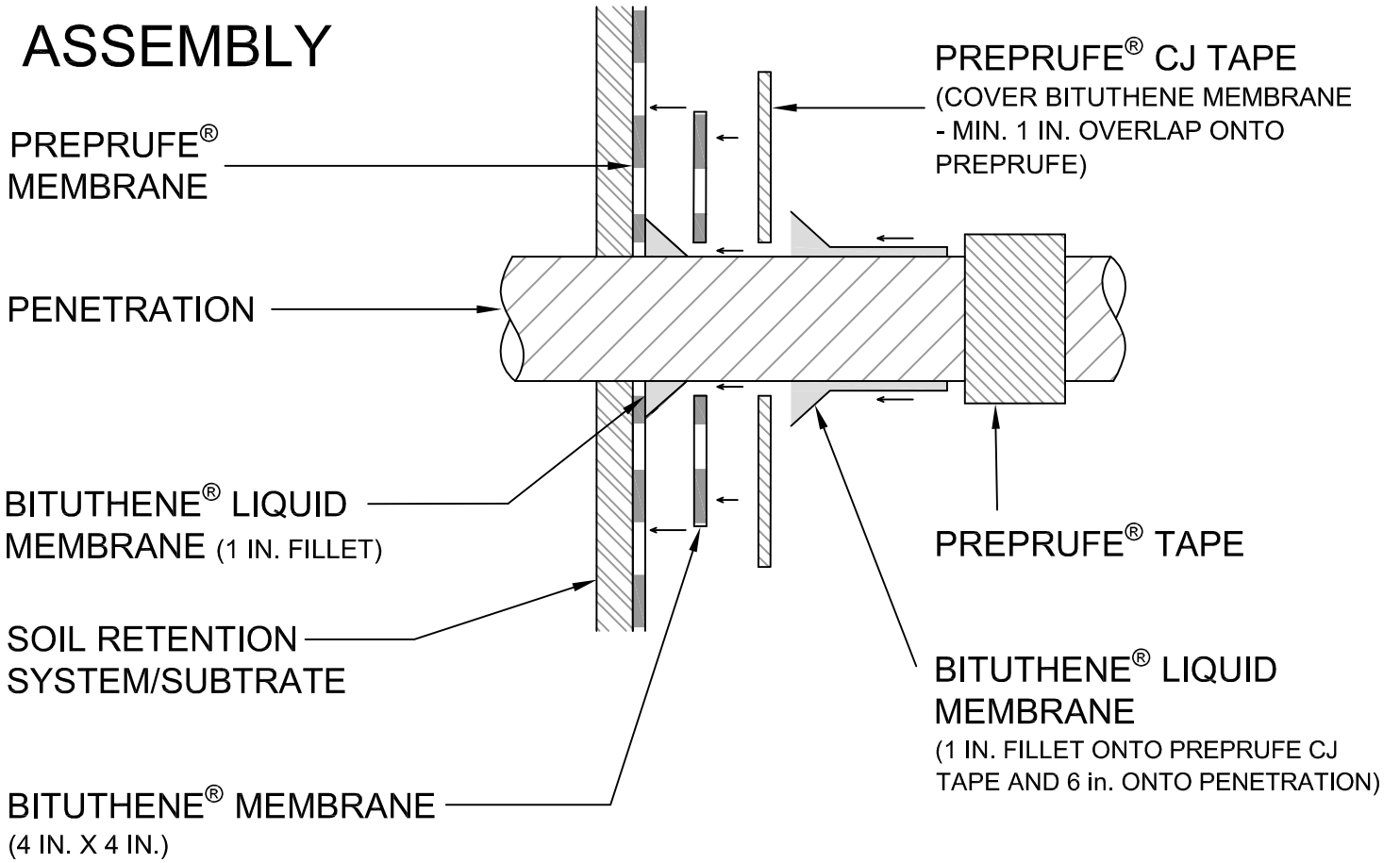
Detailing

1. Apply Preprufe field membrane according to standard installation procedures.
2. Apply termination bar to Preprufe membrane.
3. Center Preprufe CJ Tape to cover termination bar and roll firmly.
4. Protect top of termination of membrane from exposure.
5. For end lap, overlap successive membrane rolls by 3 in (75 mm).
6. Apply Preprufe Tape, centered over the lap. (Refer to PRE 031 and PRE 032)
7. Apply Hydroduct® according to Hydroduct Data Sheet.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

ASSEMBLY



FINISHED



REBAR, DOWEL & ALL-THREAD PENETRATION PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE-049

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Wall Penetration

(Rebar, Dowel, All-Thread)

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. All penetrations must be firmly secured and stable. Grout around all penetrations that are not stable. Clean loose dust or dirt from the penetration and the surrounding substrate surface using a clean, dry cloth or brush.
2. Cut the field membrane tight to the penetration and remove release liner. If membrane is not within 0.5 in (15 mm) of penetration and not more than 2 in (50 mm) from penetration, apply Preprufe Tape to cover the gap. Roll firmly into place and remove release. If the membrane is greater than 2 in (50 mm) from penetration, install more Preprufe Membrane to cover the gap repeating these instructions until Preprufe Membrane/ Tape is within 0.5 in (15 mm).
3. Install appropriate shallow head fasteners within 2 in (50 mm) of penetration as necessary to ensure Preprufe Membrane remains tight to substrate.
4. Mix and apply Bituthene Liquid Membrane around the penetration. Liquid Membrane should be placed to form a minimum 1 in (25 mm) continuous fillet at the base of the penetration.
5. Slide a 4 in (150 mm) x 4 in (150 mm) patch of Bituthene centered over the penetration and press firmly into the partially cured Liquid Membrane.
6. Install an 8 in (200 mm) x 8 in (150 mm) patch of Preprufe CJ Tape over the penetration ensuring that it completely covers the Bituthene Membrane patch and overlaps a minimum of 1 in (25 mm) onto the field Preprufe Membrane.
7. Apply Liquid Membrane to form a minimum 1 in (25 mm) continuous fillet between the Preprufe CJ Tape and the base of the penetration. Extend a 90-mil (2.2 mm) continuous coating of Liquid Membrane minimum of 6 in (150 mm) out onto the penetration.
8. Wrap the penetration with Preprufe Tape, positioning the tape at the base of the penetration. Remove enough release liner to overlap tape on to itself and roll/ press firmly into place. Remove remaining release liner and discard.

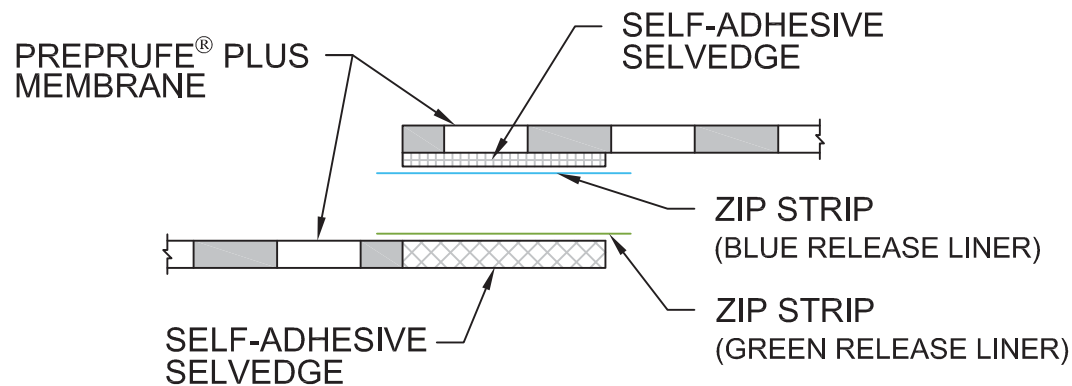
Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

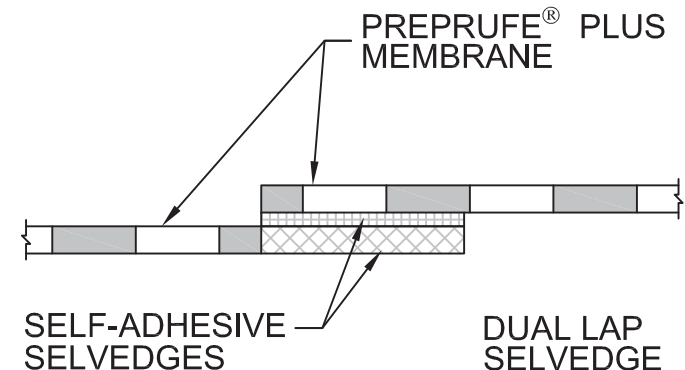
Ensure Adcor® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum.

Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



ASSEMBLY
(PLAN OR SECTION VIEW)



FINISHED
(PLAN OR SECTION VIEW)

NOTES:

- POSITION SUCCEEDING SHEETS TO OVERLAP THE PREVIOUS SHEET 3 IN. (75 mm) ALONG THE MARKED SELF-ADHESIVE SELVEDGE
- PEEL BACK BOTH THE GREEN AND BLUE ZIP STRIPS SIMULTANEOUSLY IN THE OVERLAP AREA TO ACHIEVE AN ADHESIVE TO ADHESIVE BOND
- ROLL FIRMLY INTO PLACE



SIDE LAP
PREPRUFE[®] PLUS WATERPROOFING SYSTEM

DRAWING: PRE-059

SCALE: Not to Scale

EFFECTIVE DATE: 07/01/16

SUPERSEDES: 04012015

Preprufe® Plus Side Lap

Prior to Membrane Installation, Review the Preprufe® Plus Data Sheet



Surface Prep

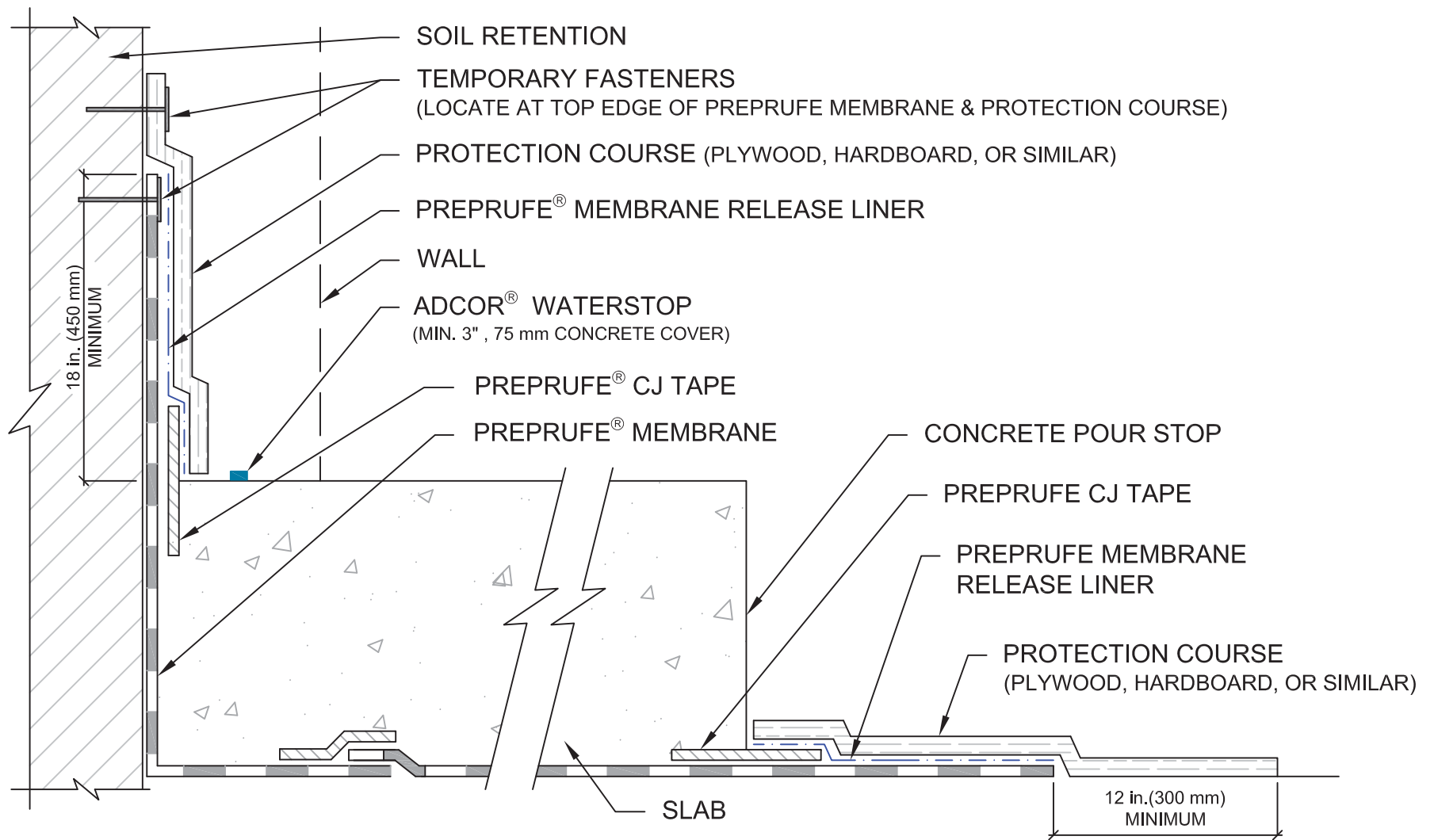
All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than ½ inch. The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Plus Data Sheet section on Surface Preparation.

Detailing

1. Install Preprufe Plus Membrane in accordance with the Preprufe Plus Data Sheet section on Installation.
2. Position succeeding sheets to overlap the previous sheet 3 in. (75 mm) along the marked self-adhesive selvedge.
3. Peel back both the green and blue zip strips simultaneously in the overlap area to achieve an adhesive to adhesive bond.
4. Roll firmly into place.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.



- NOTES:
- DO NOT PENETRATE OR DAMAGE THE PREPRUFE DURING CONCRETE PLACEMENT, FORMWORK & BULKHEAD ERECTION AND BETWEEN CONSTRUCTION PHASES
 - EXTEND THE PREPRUFE A MINIMUM OF 12 IN (300 mm) PAST ANY STEEL EXTENDING FROM THE SLAB
 - REMOVE PROTECTION COURSE AND TEMPORARY FASTENERS JUST PRIOR TO TIE-IN TO NEW PREPRUFE MEMBRANE
 - ENSURE ANY FASTENER HOLES IN THE MEMBRANE ARE SEALED WITH PREPRUFE TAPE
 - GCP HYDRODUCT NOT SHOWN FOR CLARITY
 - GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



PREPRUFE® WATERPROOFING SYSTEM

TEMPORARY PROTECTION DURING CONSTRUCTION SEQUENCING

DRAWING: PRE-060

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Temporary Protection During Construction Sequencing

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

1. Install Preprufe membrane in accordance with the Preprufe data sheet section on installation.
2. Extend the Preprufe a minimum of 12 in (300 mm) past any steel extending from slab.
3. Cover exposed Preprufe membrane with release liner.
4. Apply protection course over Preprufe and release liner, extending a minimum of 12 in (300 mm) past Preprufe membrane.
5. Remove protection course, release liner and repair the membrane if necessary prior to concrete pour.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

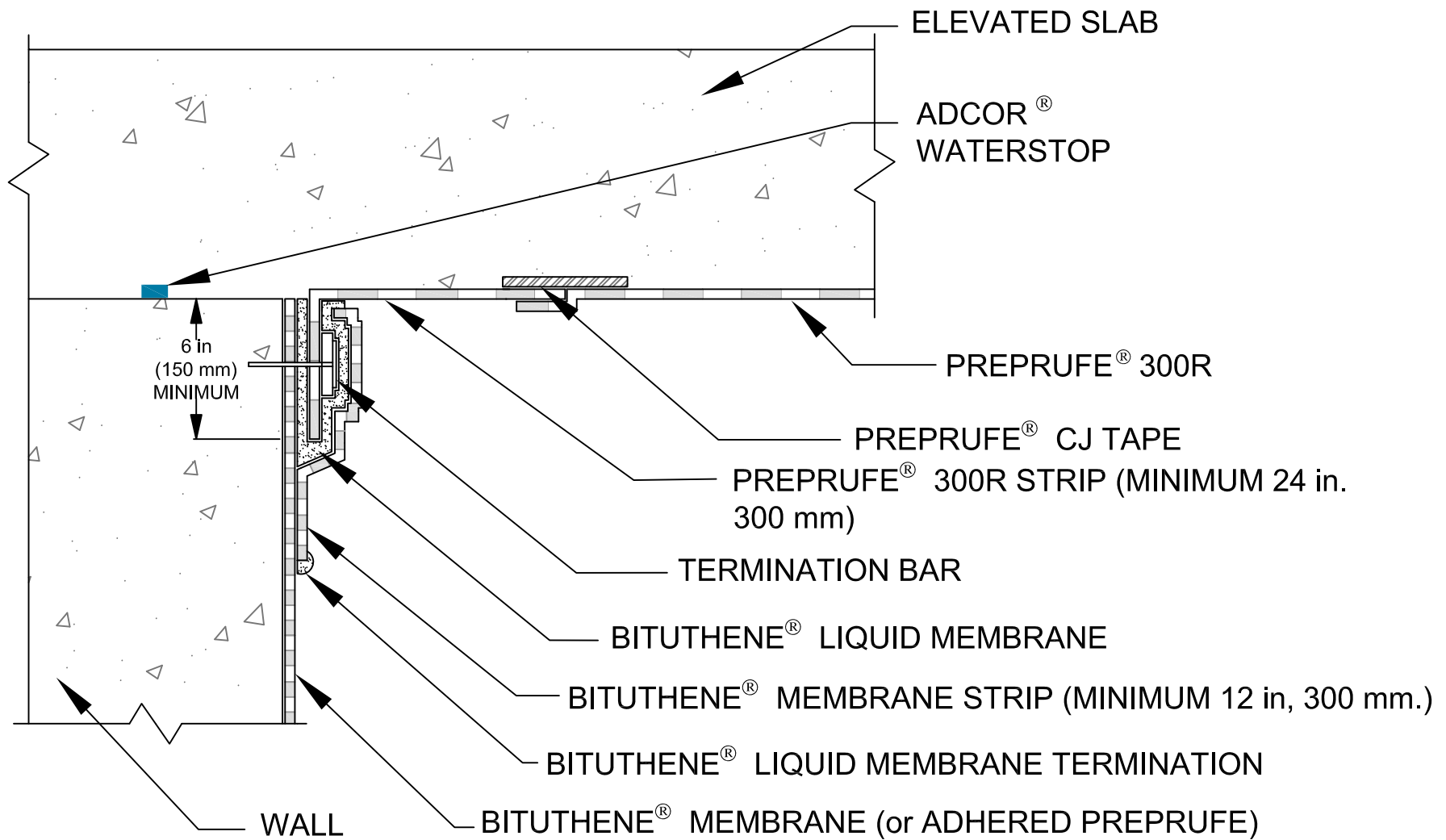
Do not penetrate or damage the Preprufe during concrete placement, formwork and bulkhead erection and between construction phases.

Extend the Preprufe a minimum of 12 in (300 mm) past any steel extending from slab.

Remove protection course and temporary fasteners just prior to tie-in to new Preprufe Membrane.

Ensure any fastener holes in the membrane are sealed with Preprufe Tape.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



NOTES:

- PREPRUFE STRIP SHOULD BE PROTECTED DURING BACKFILL PLACEMENT AND COMPACTION
- FOLD PREPRUFE STRIP BACK ONTO COMPACTED EARTH/GRAVEL FOR TIE-IN WITH PREPRUFE MEMBRANE UNDERSLAB
- PROTECTION COURSE/DRAINAGE & BACKFILL NOT SHOWN FOR CLARITY
- DETAIL ALSO APPLICABLE TO TIE PREPRUFE INTO PREVIOUSLY INSTALLED (ADHERED) PREPRUFE
- GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



BITUTHENE® TIE-IN WITH ELEVATED SLAB
PREPRUFE® WATERPROOFING SYSTEM

DRAWING: PRE-061

SCALE: Not To Scale

Effective Date: 07/01/2016

Supersedes: 04012015

Bituthene Tie-In with Elevated Slab

Prior to Membrane Installation, Review the Preprufe® Data Sheet



Surface Prep

All surfaces must be sound and solid to eliminate movement during the concrete pour. Substrate must be regular and smooth with no gaps or voids greater than 0.5 in (15 mm). The surface should also be free from loose aggregate and sharp protrusions as outlined in the Preprufe® Data Sheet section on Surface Preparation.

Detailing

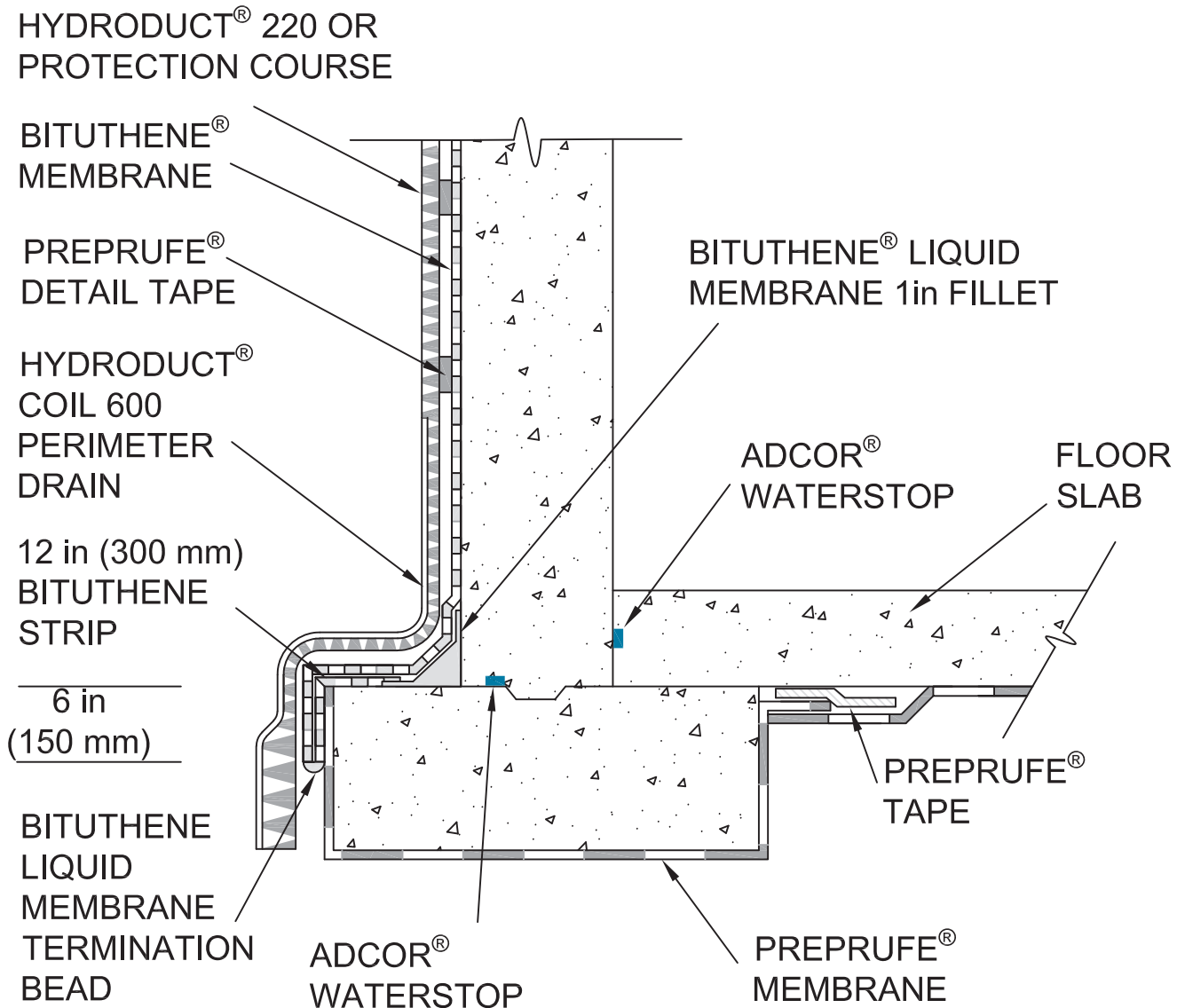
1. Install Preprufe membrane in accordance with the Preprufe data sheet section on installation.
2. Install Bituthene® Liquid Membrane from the top of the wall over the existing Bituthene® Membrane, extending down a minimum of 6 in (150 mm).
3. While the Bituthene Liquid Membrane is still “wet” (uncured), embed 6 in (150 mm) of a min. 24 in (600 mm) Preprufe 300R strip.
4. Install a termination bar through the Preprufe 300R securely into the vertical wall.
5. Re-flash over the edge of the Preprufe 300R with Bituthene Liquid Membrane and extend up over the termination bar ensuring the Preprufe 300R and the termination bar are fully encapsulated with Bituthene Liquid Membrane.
6. Install a 12 in (300 mm) strip of Bituthene Membrane from the top of the wall extending down over the Bituthene Liquid Membrane/ termination bar and onto the existing Bituthene Membrane.
7. Terminate the bottom edge, top edge and all seams of the Bituthene strip with Bituthene Liquid Membrane.
8. Protect the Preprufe 300R strip during backfill, placement and compaction.
9. Fold the Preprufe 300R strip back onto the compacted earth/gravel for tie-in with Preprufe 300R underslab.
10. Ensure that the Bituthene and vertically installed Preprufe are protected with an approved protection course prior to backfill.

Special Notes

Preprufe membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Hydroduct or approved protection course not shown for clarity.

GCP may require an alternative GCP waterstop based on design conditions, at GCP’s discretion.



NOTE: GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



FOUNDATION WALL
 FLOOR SLAB AT FOOTING LEVEL (OPTION - 2)
 BITUTHENE® WATERPROOFING SYSTEM

DRAWING: BIT-002

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Foundation Wall

Floor Slab At Footing Level (Option – 2)

Prior to Membrane Installation, Review the Bituthene®
Data Sheet



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that may hinder the adhesion or regularity of the membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Bituthene® Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer.

Detailing

1. Install the field membrane in accordance with the Bituthene Data Sheet section on Installation
2. Form a .75 in (20 mm) fillet of Bituthene® Liquid Membrane in corner extending 2.5 in (65 mm) onto wall and footing. Allow to cure.
3. Apply a 12 in (300 mm) Bituthene Strip centered over the outside corner of the footing.
4. Apply Bituthene membrane down wall, onto horizontal surface of footing, and around outside corner of footing.
5. Extend Bituthene membrane a minimum of 6 in (150 mm) down vertical surface of footing, lapping onto Preprufe membrane. Do not apply primer to the back of the Preprufe membrane for installation of the Bituthene membrane. Preprufe installation instructions can be found on the Preprufe data sheet at www.gcpat.com.
6. Apply bead of Liquid Membrane on all terminations.
7. Apply Preprufe membranes and Hydroduct® according to the installation instructions found on the data sheet.

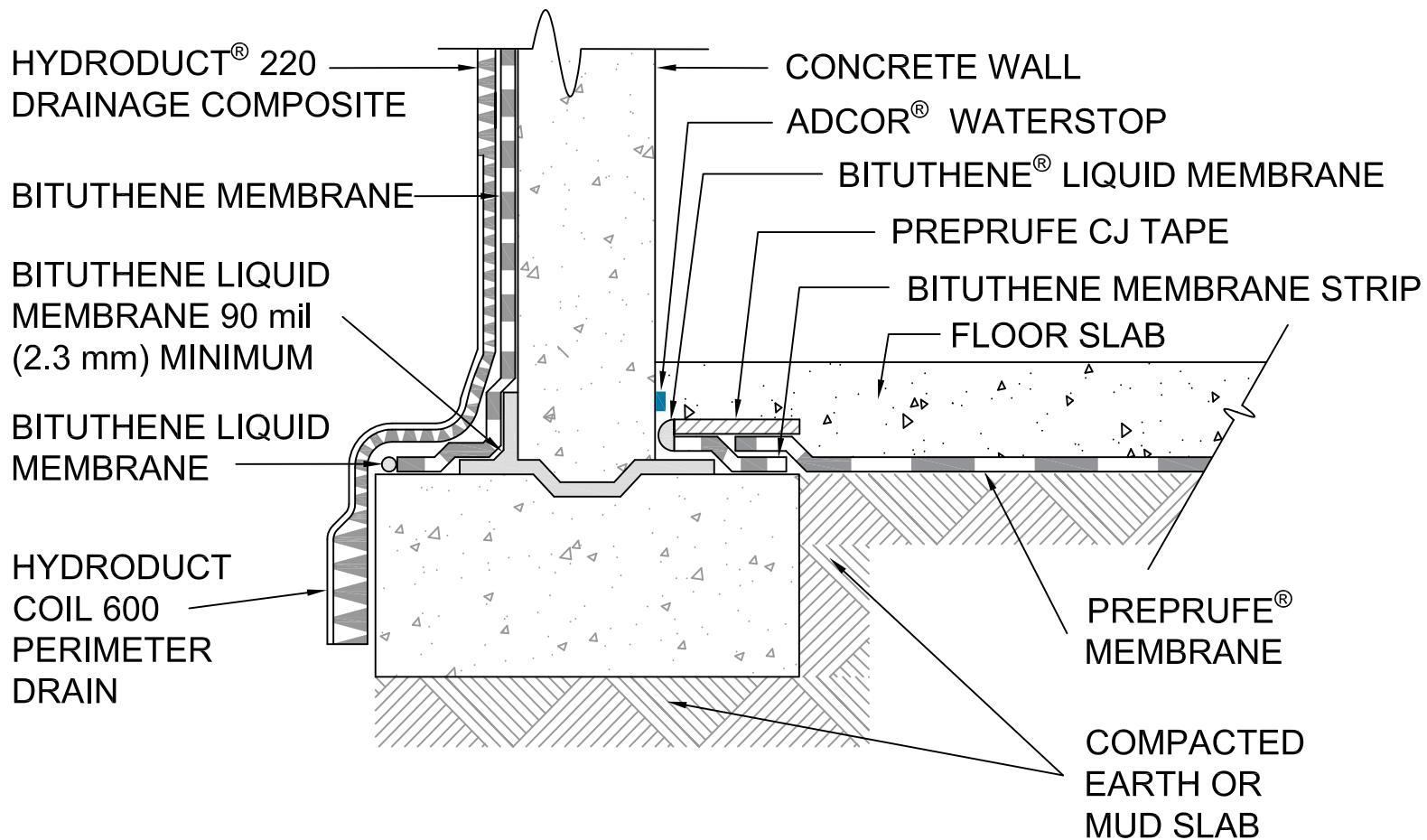
Special Notes

Bituthene membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation. It is acceptable to apply Bituthene membrane directly over freshly applied Bituthene Liquid Membrane (LM) provided the LM does not displace.

Provides temporary protection for the Preprufe membrane at the tie-in location until the Bituthene membrane tie-in is installed. The tie-in should be completed and backfilled as soon as possible. An approved protection course must be used over the exposed Preprufe membrane and the Bituthene membrane prior to backfilling.

Ensure Adcor® waterstop is encapsulated with a min. of 3 in (75 mm) concrete cover. Avoid installing Adcor® waterstop in areas where it may be subjected to prolonged exposure or immersion in water prior to concrete placement. A GCP injectable waterstop should be considered if the waterstop may be exposed and or immersed in water prior to concrete placement or when access to Adcor® waterstop is limited after installation by rebar. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions GCP's discretion.



- NOTES:
- THE FOOTING KEYWAY SHOULD BE FORMED TO CREATE A REGULAR AND UNIFORM SHAPE ALLOWING PROPER DETAILING OF THE BITUTHENE LIQUID MEMBRANE.
 - GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



**FOUNDATION WALL
FLOOR SLAB AT FOOTING LEVEL (OPTION - 4)
BITUTHENE® WATERPROOFING SYSTEM**

DRAWING: BIT-004

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Foundation Wall

Floor Slab At Footing Level (Option – 4)

Prior to Membrane Installation, Review the Bituthene®
Data Sheet



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that may hinder the adhesion or regularity of the membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Bituthene® Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer.

Detailing

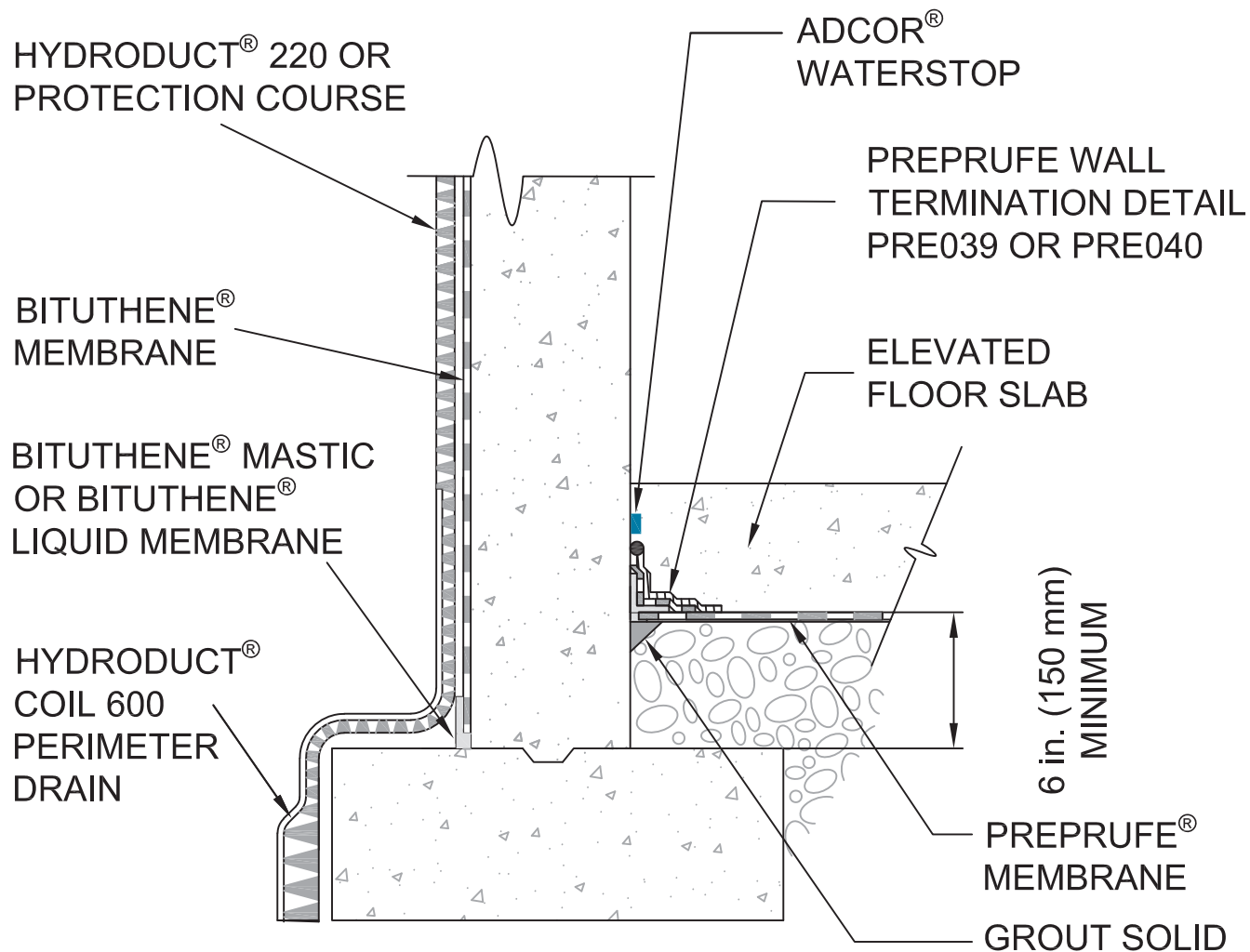
1. Apply Bituthene Liquid Membrane to a thickness of 90-mil (2.3 mm) on the horizontal surface of the footing in the keyway. Extend the Liquid Membrane a minimum of 2.5 in (65 mm) onto the horizontal surface of the footing on each side of the foundation wall, and extend up the external foundation wall surface a minimum of 2.5 in (65 mm).
2. Apply a strip of Bituthene membrane onto the Liquid Membrane that extends beyond the internal foundation wall surface.
3. Apply Preprufe® membrane in accordance with the Preprufe data sheet and overlap the Preprufe membrane onto the Bituthene Strip a minimum of 3 in (75 mm).
4. Install Preprufe CJ Tape centered over the edge of the Preprufe membrane and adhere it to the Bituthene strip and Preprufe membrane.
5. Apply a termination seal of Bituthene Liquid Membrane along the Preprufe Tape and Bituthene Strip termination.
6. Install the Bituthene on the wall in accordance with the Bituthene Data Sheet section on installation.
7. Apply bead of Liquid Membrane on all terminations.
8. Apply Preprufe and Hydroduct according to the installation instructions found on the data sheet.

Special Notes

Bituthene membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Ensure Adcor® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



NOTES:

- INTENDED FOR PROJECTS WITH PERMANENT DEWATERING OR NON-HYDROSTATIC CONDITIONS
- GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



FOUNDATION WALL ELEVATED FLOOR SLAB (OPTION - 2)

BITUTHENE® WATERPROOFING SYSTEM

DRAWING: BIT-006

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Foundation Wall

Elevated Floor Slab (Option – 2)

Prior to Membrane Installation, Review the Bituthene®
Data Sheet



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that may hinder the adhesion or regularity of the membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Bituthene® Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer.

Detailing

1. Install the field membrane in accordance with the Bituthene® Data Sheet section on Installation.
2. Apply membrane to within 1 in (25 mm) of base of wall.
3. Apply Bituthene Liquid membrane in corner, extending over membrane a minimum of 1 in (25 mm).
4. Terminate the Preprufe at the foundation wall.
5. Apply Preprufe Wall Termination detail PRE039.
6. Apply Hydroduct 220 according to Hydroduct 220 Data Sheet.

Special Notes

Bituthene membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Ensure Adcor® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.

HYDRODUCT® 220
DRAINAGE COMPOSITE

BITUTHENE®
MEMBRANE

PREPRUFE®
DETAIL TAPE

HYDRODUCT®
COIL 600
PERIMETER
DRAIN

12 in (300 mm)
BITUTHENE
STRIP

MIN 6 in
(150 mm)

HYDRODUCT®
COIL 600
PERIMETER
DRAIN

ADCOR®
WATERSTOP

CONCRETE
SLAB

BITUTHENE® LIQUID
MEMBRANE
TERMINATION BEAD

PREPRUFE®
MEMBRANE

NOTE - GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



FOUNDATION WALL FLUSH TO STRUCTURAL SLAB BITUTHENE® WATERPROOFING SYSTEM

DRAWING: BIT-008-B

SCALE: Not to scale

EFFECTIVE DATE: 03/01/2016

SUPERCEDES: NEW

Foundation Wall

Flush to Structural Slab

Prior to Membrane Installation, Review the Bituthene®
Data Sheet



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that may hinder the adhesion or regularity of the membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Bituthene® Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface.

Detailing

1. Install Preprufe membrane in accordance with the Preprufe Data Sheet section on installation.
2. Apply a 12 in (300 mm) Bituthene strip centered over the construction joint of slab to wall lapping a minimum of 6 in (150 mm) onto the fully adhered Preprufe membrane.
3. Apply Bituthene membrane on the vertical wall and extend Bituthene a minimum of 6 in (150 mm) down the vertical face of slab and onto the previously installed Bituthene strip.
4. Apply a bead of Liquid Membrane on all terminations.
5. Apply Hydroduct 220 according to Hydroduct 220 Data Sheet.
6. Install Hydroduct Coil 600 Perimeter Drain.

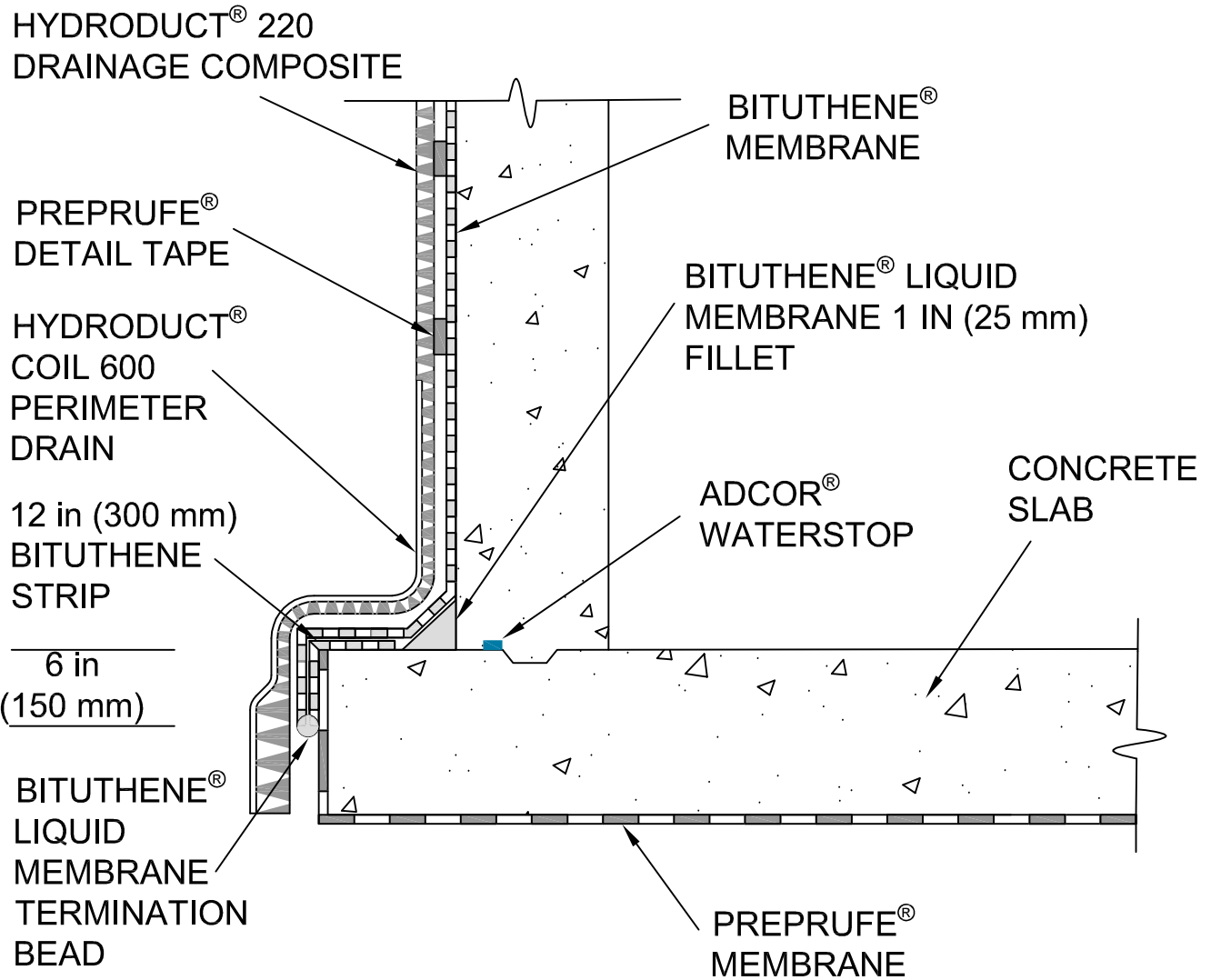
Special Notes

Bituthene® membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Provide temporary protection for Preprufe at the tie-in location until the Bituthene tie-in is installed. The tie-in should be completed and backfilled as soon as possible. An approved protection course must be used over the exposed Preprufe and the Bituthene prior to backfilling.

Ensure Adcor® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



NOTE - GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



FOUNDATION WALL STRUCTURAL SLAB - OPTION 2

BITUTHENE® WATERPROOFING SYSTEM

DRAWING: BIT-008-A

SCALE: Not to scale

EFFECTIVE DATE: 03/01/2018

SUPERCEDES: 07/01/2016

Foundation Wall

Structural Slab (Option – 2)

Prior to Membrane Installation, Review the Bituthene®
Data Sheet



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that may hinder the adhesion or regularity of the membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Bituthene® Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface.

Detailing

1. Install Preprufe membrane in accordance with the Preprufe Data Sheet section on installation.
2. Install a .75 in (20 mm) fillet of Bituthene Liquid Membrane in corner extending 2.5 in (65 mm) onto wall and footing. Allow to cure.
3. Apply a 12 in (300 mm) Bituthene strip centered over the outside corner of the footing.
4. Apply Bituthene membrane down wall, onto horizontal surface of the footing, and around the outside corner of the footing.
5. Extend Bituthene a minimum of 6 in (150 mm) down vertical surface of footing, lapping onto Preprufe membrane. Do not apply primer to the back of the Preprufe for installation of the Bituthene.
6. Apply a bead of Liquid Membrane or Mastic on all terminations.
7. Apply Hydroduct 220 according to Hydroduct 220 Data Sheet.

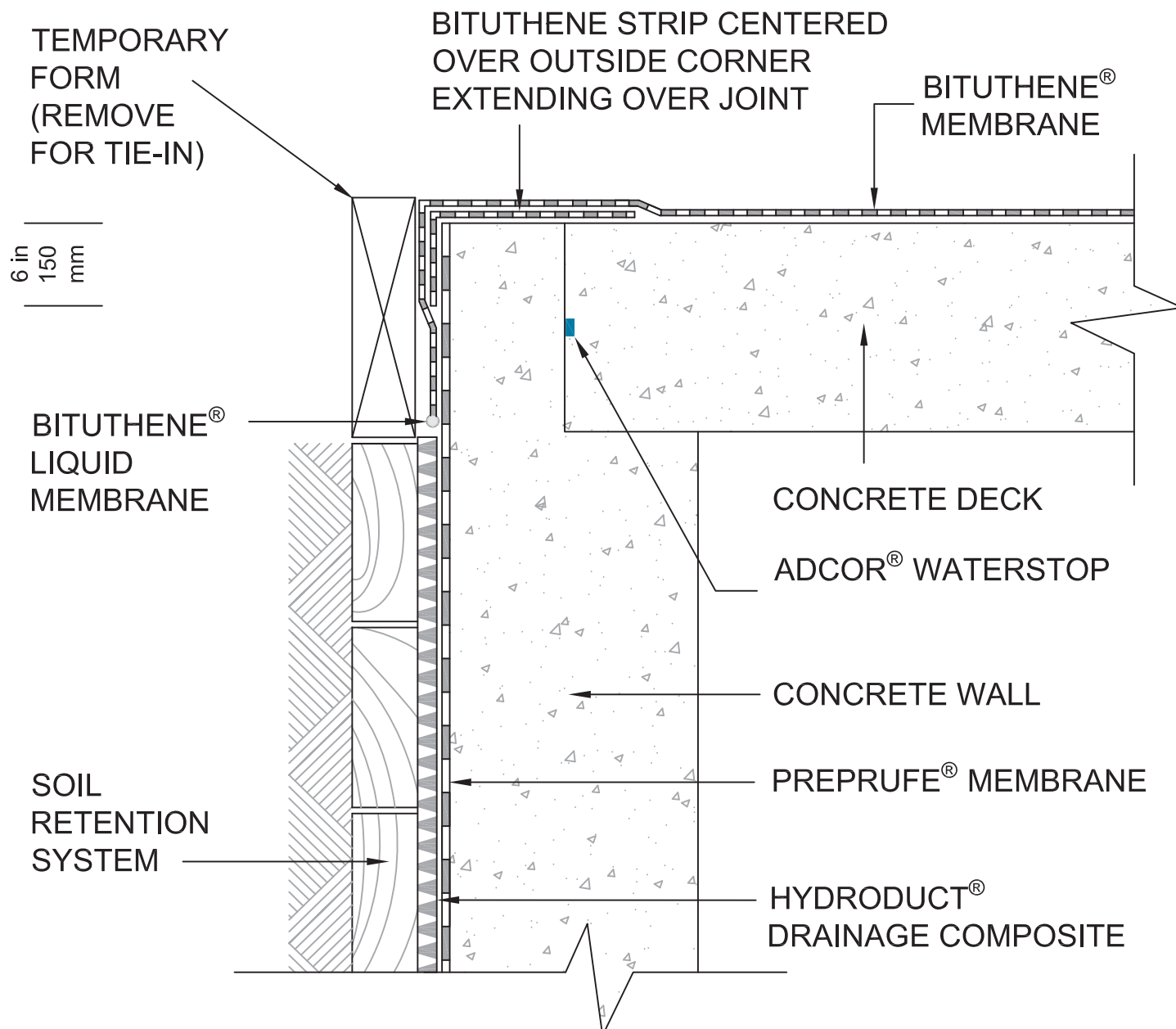
Special Notes

Bituthene® membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Provide temporary protection for Preprufe at the tie-in location until the Bituthene tie-in is installed. The tie-in should be completed and backfilled as soon as possible. An approved protection course must be used over the exposed Preprufe and the Bituthene prior to backfilling.

Ensure Adcor® waterstop is encapsulated with 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.



NOTE - GCP MAY REQUIRE AN ALTERNATE GCP WATERSTOP BASED ON DESIGN CONDITIONS



TIE INTO PLAZA DECK WATERPROOFING

BITUTHENE® WATERPROOFING SYSTEM

DRAWING: BIT-014

SCALE: Not to scale

EFFECTIVE DATE: 07/01/2016

SUPERCEDES: 04012015

Tie into Plaza Deck Waterproofing

Prior to Membrane Installation, Review the Bituthene®
Data Sheet



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that may hinder the adhesion or regularity of the membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Bituthene® Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer.

Detailing

1. Install Preprufe Membrane onto the vertical soil retention system up to the level of the horizontal deck.
2. Place concrete and remove top 12 in (300 mm) of temporary soil retention to gain access to the wall.
3. Apply a 12 in (300 mm) Bituthene strip centered over the outside corner.
4. Apply a Bituthene Strip centered over the cold joint. In this detail, the Bituthene Strip is an extension of the Bituthene Strip for the outside corner. Do not apply primer to the back of the Preprufe for installation of the Bituthene.
5. Install the field membrane in accordance with the Bituthene Data Sheet section on Installation.
6. Install membrane from the low point to the high point so that laps shed water.
7. Apply bead of Bituthene Liquid Membrane on all terminations and T-Joints.
8. Apply Hydroduct 220 on the wall and Hydroduct 660 on the deck according to the respective Hydroduct Data Sheet.

Special Notes

Bituthene membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic. Protect membrane from sunlight as quickly as possible after installation.

Provide temporary protection for Preprufe at the tie-in location until the Bituthene tie-in is installed. The tie-in should be completed and backfilled as soon as possible. An approved protection course must be used over the exposed Preprufe and the Bituthene prior to backfilling.

Ensure Adcor® waterstop is encapsulated with a 3 in (75 mm) of concrete cover minimum. Apply Adcor® waterstop according to the installation instructions found on the data sheet.

GCP may require an alternative GCP waterstop based on design conditions, at GCP's discretion.