

# DARAWELD<sup>®</sup> C Data Sheet

Bonding Agent for Concrete Repair ASTM C1059 Type II

## Product Description

DARAWELD<sup>®</sup> C is a bonding agent for concrete that complies with the requirements of ASTM C1059 Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete. DARAWELD<sup>®</sup> C will improve the bond between new to old or new to new concrete. DARAWELD<sup>®</sup> C is a dispersion of internally plasticized, high polymer resin in water. Mixed with cement, sand and water, DARAWELD<sup>®</sup> C forms a strong, highly adhesive bonding grout which will adhere to properly prepared concrete substrates.

## Uses

DARAWELD<sup>®</sup> C is intended for bonding new to old or new to new Portland cement concrete in exterior or interior applications. It is used for bonding, patching, or re-surfacing concrete floors, walls, beams, columns, or other structural members. DARAWELD<sup>®</sup> C will improve the adhesion of pneumatically applied mortar or concrete. DARAWELD<sup>®</sup> C grouts and mortars have been used in a wide variety of miscellaneous applications. These include bonding construction joints, prevention of cold joints in multiple pours, leveling of floors prior to secondary surfacing, skidproofing existing floors and finishing concrete block walls.

## Surface Preparation

The surface to which DARAWELD<sup>®</sup> C grout or topping is applied must be clean and sound. Remove oil, grease and similar substances as required. Remove unsound concrete, loose material and foreign matter by scarifying, hydroblasting, or other mechanical means. All concrete, whether new or old, when cleaned, must be thoroughly rinsed with water. A properly prepared surface will be clean and sound, readily and uniformly wettable with water. If the surface condition is questionable, apply a test patch for bond evaluation.

## Application Information

### Bonding Grout

For bonding grout applications, mix equal parts DARAWELD<sup>®</sup> C and water and then add this to a mixture consisting of:

- 5 parts Portland cement
- 2 parts fine sand

ASTM C144 sand is generally suitable for most applications. First, blend the cement and sand together. Next, mix the DARAWELD<sup>®</sup> C and water and add this solution to the cement and sand. Then, mix thoroughly by mechanical means to a thick, creamy consistency.

Additional DARAWELD® C and water solution may be added until the desired consistency is obtained. The DARAWELD® C bonding grout acts as a glue to bond new concrete to existing concrete. Before applying the bonding grout, the surface of the old concrete should be thoroughly moistened with water. Avoid puddles or standing water in small pits and crevices. Excess water should be removed by mopping or by blowing with compressed air. Use a stiff bristle brush or corn broom to apply the DARAWELD® C bonding grout in a layer no more than 1/8 in. thick.

In order to obtain maximum bond strength, the grout must be intimately scrubbed onto the old concrete surface. DARAWELD® C bonding grout has a short working life. DARAWELD® C is non-reemulsifiable, thus if it sets or dries, its bonding benefits are eliminated. Concreting over the bonding grout must occur before the mixture skins over, achieves set or dries out.

## Topping

For topping applications, mix equal parts DARAWELD® C and water and then add this to the topping mixture. The topping must be applied while the bonding grout is still soft or tacky.

A typical mix for vertical surfaces is:

- 1 part Portland cement
- 3 parts sand

A typical mix for a floor surface topping acceptable for foot or light wheel traffic is:

- 1 part Portland cement
- 2 parts sand

The amount of DARAWELD® C and water solution will depend upon the water requirement of the cement and the amount of water in the sand. Follow the procedure given for the bonding grout in determining the water requirement and for mixing. For deeper resurfacing, thick patches and overlays, the topping may be proportioned with larger size aggregate consistent with the depth of the overlay. Care should be taken in finishing very thin overlays. It is difficult to produce a high polished finished surface on thin patches or overlays without impairing the quality of the topping and jeopardizing the strength of the bond. Excessive steel troweling will cause excessive bleeding with possible self-desiccation and shrinkage. Excessive working, particularly several hours after wood floating, may break the bond between the DARAWELD® C grout and the old surface before bond strength has fully developed. In thin resurfacing, wood floating alone, immediately after screeding, will produce maximum bond and minimum shrinkage and therefore is preferred. The surface obtained is often smooth enough for most purposes. Steel troweling should only be used when necessary. Any steel troweling should be very light, employing a minimum number of passes. Under no circumstances should steel troweling be performed later than two hours after placing.

## Curing

DARAWELD® C patches or overlays should be moist cured just like any normal Portland cement work. Membrane curing, or covering with non-staining paper is recommended. To achieve maximum ultimate strength, the patch or overlay should be allowed to dry after the curing period.

## Coverage

One gallon of DARAWELD® C used in the suggested bonding grout mixture will yield approximately 0.67 ft<sup>3</sup>. This is sufficient to cover an area of 130 ft<sup>2</sup> at 1/16 in. thickness or 65 ft<sup>2</sup> at 1/8 in. thickness. One gallon of DARAWELD® C used in a topping mix will yield approximately 1.8 ft<sup>3</sup>. This is sufficient to cover an area of 86 ft<sup>2</sup> at 1/4 in. thickness.

	VOLUME, GALS				COVERAGE, SQ. FT.				
	DARAWELD® C	Cement	Mason's Sand	Water	Yield, Cu. Ft.	Yield, Gals.	1/32 in. Thick	1/16 in. Thick	1/8 in. Thick
Dustproofing	1	-	-	2	0.27	2			
Fine Cracks	1	1	-	1	0.32	2.4	120	60	-
Wall Finish	1	3	-	3	0.68	5.1	260	130	-
Stucco Patching	1	5	-	1	0.52	3.9	200	100	50
Wide Cracks	1	1	1.5	0.5	0.37	2.8		70	35
Bonding	1	5	2	1	0.68	5.1		130	65
Floor Finishing	1	5	2.5	1	0.72	5.4		140	-
Non-skid Surfaces	1	5	5	1.5	0.99	7.5		190	95
Waterproofing	1	3	6	1	0.91	6.8		175	87
Floor Leveling		5	10	2	1.45	10.9		280	140

## Precautions

DARAWELD® C should be used as a grout with Portland cement and sand. A DARAWELD® C bonding grout or topping mix must be thoroughly mixed for optimum performance. This mixing should be used as a means to avoid entrapment of air and to remove lumps.

DARAWELD® C bonding grout will start to stiffen in 30-40 minutes after mixing. Mix only in small batches which may be used within this period. Pre-wet surface before applying bonding grout, but remove all puddles. DARAWELD® C bonding grout and topping must be intimately scrubbed onto the prepared, clean, moist, existing concrete surface.

DARAWELD® C bonding grout must remain soft or tacky when topping is applied. All topping, whether containing DARAWELD® C or not, must be cured. All equipment used in handling DARAWELD® C and bonding grout should be cleaned with water immediately after use.

## Packaging

DARAWELD® C is available in 3.5 gallon (13 L) pails, 55 gallon (208 L) drums and in cases of four 1 gallon (3.8 L) jugs.

## Health & Safety

All precautions defined on the SDS (Safety Data Sheet) for DARAWELD<sup>®</sup> C must be followed.

## Storage

DARAWELD<sup>®</sup> C must be protected from freezing at temperatures of 40°F (5°C) and below, as the admixture is not usable once frozen.

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