

Technical Information Sheet



I.S.O. Stick™ Insulation Adhesive

Item Description	Item Number
Part 1: 5-gallon (19 L) bag-in-box	W56RACIA5B1
Part 2: 5-gallon (19 L) bag-in-box	W56RACIA5B2
Part 1: 15-gallon (57 L) drum	W56RACIA15D1
Part 2: 15-gallon (57 L) drum	W56RACIA15D2
Part 1: 50-gallon (189.3 L) drum	W56RACIA5D1
Part 2: 50-gallon (189.3 L) drum	W56RACIA5D2

Description

I.S.O. Stick is a two-component, LVOC, low-rise polyurethane insulation adhesive applied in beads for adhesive attachment of Elevate-approved roof insulations to acceptable substrates as allowed by Elevate specifications. I.S.O. Stick is specifically designed to be dispensed using the PaceCart™ (or similar low pressure dispensing system), which simultaneously pumps I.S.O. Stick Parts 1 and 2 to a static mixer, allowing a properly mixed bead of adhesive to be applied to the receiving substrate.

NOTE: PaceCart is a registered trademark of OMG, Inc. *PaceCart must be equipped with a 15-gallon drum conversion kit to dispense 15-gallon drums.

Method of Application

1. Install only as much roof insulation as can be covered and made watertight during that working day.
2. The substrate must be clean, smooth, dry, free of sharp edges, loose and foreign materials, oil, grease, and other contaminants.
3. The PaceCart (or similar low pressure dispensing system) must be used to install I.S.O. Stick Insulation Adhesive. PaceCart must be equipped with a 15-gallon drum conversion kit to dispense 15-gallon drums.
4. Install I.S.O. Stick only when ambient conditions, bonding substrates and insulations exceed 40 °F (4 °C) and rising.
5. To mix and dispense I.S.O. Stick with the PaceCart, properly install the I.S.O. Stick Parts 1 and 2 onto the PaceCart per manufacturer’s instructions. To install the adhesive, open both valves located on the PaceCart applicator gun to start application of the adhesive to the substrate. The adhesive should be properly mixed in a 1:1 ratio through the attached static mix tip. When properly mixed, there should be no marbling in the adhesive. **NOTE:** If an alternative dispensing system is used, follow the manufacturer’s ioperating instructions.
6. Apply the adhesive on the substrate in beads spaced a maximum of 12" (300 mm) on center, as specified to meet wind uplift requirements. Allow adhesive to rise ¾" - 1" (19 mm – 25.4 mm) and then lay the suitable insulation into position.

Method of Application Continued

7. To ensure that the insulation makes adequate contact with the I.S.O. Stick adhesive during the critical set-up period, set the insulation board 4' x 4' (1.22 m x 1.22 m) maximum] in fresh I.S.O. Stick before a skim coat develops.
8. Thoroughly walk on each insulation board immediately after setting it to ensure the substrate and insulation are in complete contact while the I.S.O. Stick sets. Continue to place pressure using weighty objects such as adhesive pails on the insulation until the adhesive sets (typically 4 - 8 minutes) to ensure proper adhesion.
9. To store previously opened I.S.O. Stick containers, close the valves located on the gun and turn off the pump on the PaceCart. Remove and discard the static mixing tip. Relieve pressure in the adhesive lines by opening and closing the valves on the adhesive gun. Keep Part 1 and Part 2 containers of I.S.O. Stick connected to the PaceCart.

Method of Application

Mix/Meter/Dispense units necessary for dispensing I.S.O. Stick 50-gallon drums

1. Use high pressure pump/proportioning units to dispense Elevate I.S.O. Stick adhesive, such as:
 - Graco Predator™ Proportioner
 - Graco E-10 Reactor
 - AST Adhesive System Technology PCH GMP-075
 - AST Adhesive System Technology PCH GMP-500
2. Mix/meter/dispense units shall include heated hoses, and capabilities to dispense mixed I.S.O. Stick adhesive in spray and/or bead application.
3. Dispense Elevate I.S.O. Stick Adhesive with pre-heater and hose temperature set between 90 °F and 120 °F (32 °C – 49 °C).
4. Pump pressure for spray application should be approximately 80 PSI, adjusted as required to maintain full mixing and uniform spray fan.
5. Pump pressure for bead extrusion should be 50 – 60 PSI, adjusted as required to maintain full mixing and uniform continuous bead extrusion.

Storage

- Store in original unopened containers between 60 °F (16 °C) and 80 °F (27 °C) until ready for use.
- Do not store in direct sunlight.
- Do not allow I.S.O. Stick to freeze.
- Ship and store product with handle side up and keep caps of nozzle closed tightly.
- Do not expose to moisture.

Shelf Life

The shelf life is 18 months when stored according to the listed recommendations.

Precautions

- Refer to Safety Data Sheets (SDS) for additional safety information.
- Personnel who are sensitive/allergic to isocyanate or polyurethane should not work with I.S.O. Stick.
- At the start and throughout each workday, test samples made with I.S.O. Stick should be created to verify that proper mixing, set-up, and overall adhesion of insulation to substrate is being achieved before proceeding.
- Avoid contact with eyes. Wear safety glasses with side shields.
- Avoid breathing vapors. A Self-Contained Breathing Apparatus or Respirator should be used for limited ventilation.
- Avoid contact with skin. Wear gloves when dispensing. Wash hands thoroughly after handling.
- Use caution when removing caps from cartons.
- Do not burn empty kit containers. Dispose in accordance with local, federal, and state regulations.
- Insulation boards shall not exceed 4' x 4' (1.2 m x 1.2 m).

Necessary Equipment

The PaceCart and PaceCart Static mixing tips are required for application of I.S.O. Stick insulation adhesive. They both are available for purchase through local distributors. PaceCart must be equipped with a 15-gallon drum conversion kit to dispense 15-gallon drums.

NOTE: The Roofing Contractor is responsible for inspecting and maintaining PaceCart. If an alternative dispensing system is used, follow the manufacturer’s operating instructions.

LEED® Information

Post-Consumer Recycled Content: 0%

Post Industrial Recycled Content: 0%

Manufacturing Location: Rockford, MN

NOTE: LEED® is a registered trademark of the U.S. Green Building Council



Typical Properties		
Properties	Part 1	Part 2
Base	Polymeric MDI	Polyurethane Component
Color	Dark Brown	Red
Viscosity	150 - 350 cP	390 - 530 cP
Density	10.16 lb/gal (1.22 kg/L)	8.50 lb/gal (1.02 kg/L)
Specific Gravity	1.22	1.02
V.O.C. Content	11 grams/Liter	

Packaging Data		
Pail/Drum	5-gallon (19 L) or 15-gallon (57 L) or 50-gallon (189.3 L) each, Part 1 & Part 2	
Reaction Time	Boards must be placed into the I.S.O. Stick before it reaches tack-free state. Boards may be placed into adhesive shortly after it has reached its maximum rise, typically within 2 minutes. Substrate Temperature: <ul style="list-style-type: none"> ▪ PaceCart Application: 40 °F+ (4 °C+) · High Pressure Heated Spray Application: 35 °F+ (1.6 °C+) ▪ Tack-Free State: 3 – 5 minutes Set-up: 10 – 12 minutes 	
Coverage	These coverage rates are applicable when the I.S.O. Stick is mixed with 1:1 ratio and applied in the proper bead spacing (serpentine pattern) at a bead width of 5/8" - 1" (0.6 - 25.4 mm). Coverage rates will vary if spacing is increased. Coverage rate may be reduced due to irregularities in substrate. The coverage rate for I.S.O. Stick at roof perimeter and corner sections may vary per roof system design requirements.	
	Application Substrate	Coverage (ft ² /gal) Bead Spacing (field of roof)
	Insulation, Wood, Concrete	180-250 12" (305 mm) o.c.
	Smooth BUR, Modified Bitumen	150 - 170 12" (305 mm) o.c.
	Metal, Gypsum	100 - 120 12" (152 mm) o.c.

Acceptable Substrates	
Substrate	NOTE
Structural Concrete (New)	New poured decks must have a minimum 28-day cure time.
Structural Concrete (Existing)	Positive adhesion test required.
Steel	New steel decks may require cleaning to remove processing oils.
Gypsum	Positive adhesion test required.
Cementitious WoodFiber	Positive adhesion test required.
Existing Asphalt and Modified Bitumen Roofs (Mineral or Smooth Surfaced)	Positive adhesion test required.
Lightweight Concrete	Acceptable Lightweight concrete substrates include cellular or air-entrained concrete. Lightweight concrete substrates with aggregate (such as perlite or vermiculite) are not acceptable.
Plywood	5/8" thick min.
Coal Tar Pitch	Positive adhesion test required.
ISO95+™ GL / ISOGARD™, RESISTA / ISOGARD CG, ISOGARD HD, Dens-Deck Products, Expanded Polystyrene, Extruded Polystyrene, Polyiso, Wood Fiber	Non-Elevate brand insulations require a positive adhesion test.
Existing Single Ply roofs	Not acceptable
Fiberglass insulation	Not acceptable
Perlite insulation	Not acceptable
NOTE: Existing substrates containing residual asphalt must be cleaned and scraped smoothly as possible. The substrate shall be smooth, flat, clean, dry, free of sharp fins, or foreign materials All perimeters, deck seams and all penetrations must be sealed to prevent air infiltration through the deck. It is recommended to use an expanding foam or similar product be used.	

Please contact Holcim Technical Services at 800-428-4511 for further information.

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