



I.S.O.SPRAY™ S Insulation Adhesive

Firestone Item Number:

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| Part A: 55-gal Drum | W56RACIASD |
| 15-gal Drum | W56RACIASP |
| Part B: 55-gal Drum | W56RACIBSD |
| 15-gal Drum | W56RACIBSP |

DESCRIPTION:

- I.S.O.SPRAY S Insulation Adhesive is a two-part polyurethane adhesive, mixed and dispensed from a heated high-pressure spray system at various coverage rates and may be used to anchor acceptable roof insulation to acceptable substrates and to adhere multiple layers of insulation.
- Maximum insulation board size of 4' x 4' (1.2 m x 1.2 m).
- Firestone Building Products standard warranties are available up to 20-year warranty period. Please refer to the Firestone Technical Database at www.firestonebpco.com for specific warranty requirements.

METHOD OF APPLICATION:

1. Install only as much roof insulation as can be covered and made watertight during the working day.
2. The substrate must be clean, smooth, dry, free of sharp edges, loose and foreign materials, oil, grease, and other contaminants.
3. Uneven substrates may require trimming/slitting boards as necessary to obtain full attachment.
4. Immediately set the insulation boards [4' x 4' (1.22 m x 1.22 m) maximum] after spraying the I.S.O.SPRAY S Insulation Adhesive. The I.S.O.SPRAY S Insulation Adhesive will rise (under the insulation) approximately 1/8"-1/4" (3.2 mm-6.4 mm). If the I.S.O.SPRAY S does not rise, stop spraying; troubleshooting is required to determine why the I.S.O.SPRAY S is not rising.
5. To ensure that the board makes continuous contact with the adhesive during the critical set-up period, immediately after setting the board, weight each board using full pails of Bonding Adhesive or other available source of weight that will not damage the roof insulation. (This will vary depending on ambient conditions).
6. Performance of I.S.O.SPRAY S should be periodically monitored during the workday to verify that sufficient rise, adhesion and full mating of the insulation in I.S.O.SPRAY S is occurring.

COVERAGE RATE:

Full Coverage Spray Application:

- Relatively smooth surfaces will result in a coverage rate of approximately **96 ft² per gallon** (2.3 m² per L) of mixed (1:1) I.S.O.Spray S.
- Coverage rates will vary from **96 ft² per gallon** (2.3 m² per L) to **60 ft² per gallon** (1.4 m² per L) of mixed (1:1, A:B ratio) I.S.O.SPRAY S depending on the substrate.

NOTE: Refer to Equipment Suppliers suitable for use of mix/meter/spray two-component polyurethane adhesive.

NOTE: Firestone Building Products assumes no responsibility for the performance of, or claims arising from, the dispensing equipment or dispensing including over-spray damage. It is the responsibility of the roofing contractor to maintain this equipment in good working order to deliver and thoroughly mix, meter, and dispense this adhesive in 1:1 ratio of Part A:Part B at the specified temperatures and in accordance with the Spray Equipment Supplier.



Bead Coverage Application:

- At a bead width of 3/4" (19 mm) to 1" (25.4 mm), when applied over various substrates, the coverage rates of mixed (1:1) I.S.O.Spray S will vary depending of the bead spacing.
- For a 6" o.c. bead spacing, coverage rate will equal **100 – 120 ft² per gallon** (2.4 – 2.9 m² per L) of mixed (1:1) I.S.O.Spray™ S depending on the substrate
- For a 12" o.c. bead spacing, coverage rate will equal **170 – 200 ft² per gallon** (4.1 – 4.8 m² per L) of mixed (1:1) I.S.O.Spray™ S depending on the substrate

NOTE: Coverage rate may be reduced due to irregularities in substrates. Note that the coverage rate for I.S.O.Spray S at the roof perimeter and corner sections may vary according to roof system design requirements.

PHYSICAL PROPERTIES:

<u>Property</u>	<u>Minimum Performance</u>
Color, Part A	Light brown
Color, Part B	Light brown
Mix Ratio of A:B	1:1 by volume
Specific Gravity @ 77 °F Part A:	1.24
Specific Gravity @ 77 °F Part B:	1.10
Viscosity @ 77 °F Part A:	150-250 cps using RVT #2 spindle at 30 RPM
Viscosity @ 77 °F Part B:	150-250 cps using RVT #2 spindle at 30 RPM
V.O.C. Content Part A:	0 g/L
V.O.C. Content Part B:	0.9 lb/gal (108 g/L)

PACKAGING:

Part A in 15-gallon (56.8 L) pails:	145 lb (65.7 kg)
Part B in 15-gallon (56.8 L) pails:	130 lb (58.9 kg)
Part A in 55-gallon (208 L) drums:	500 lb (226.8 kg)
Part B in 55-gallon (208 L) drums:	450 lb (204.1 kg)

Note: An equal number of Part A and Part B units must be ordered. Each "A" component must be accompanied by a similarly packaged "B" component. To ensure that the 1-Part A:1-Part B is maintained throughout spraying I.S.O.SPRAY S Insulation Adhesive, use the appropriate "B" component to match the application temperatures for the job.

SHELF LIFE:

- 6-9 months when stored in unopened original drums stored between 65 °F and 85 °F (18.3 °C and 29.4 °C) and kept out of sunlight. Drums indicate a "use before" date.
- For optimum results, rotate your stock to ensure stored material has not exceeded the shelf life.

STORAGE:

- Do not allow I.S.O.SPRAY S to freeze.
- Store between 65 °F and 85 °F (18.3 °C and 29.4 °C).
- Do not store in direct sunlight.
- Keep bungs on drums tightly closed during storage.
- Do not expose to moisture.



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DECK SUBSTRATE AND METHOD OF APPLICATION:

Deck/Substrate	Acceptable	Pull Test Required	Not-Acceptable	Notes
Steel	X			New steel decks may require cleaning to remove processing oils.
Existing Structural Concrete	X			New poured decks must have a minimum 28-day cure time.
Plywood and OSB	X			
Cementitious Wood Fiber	X			
Gypsum Decks	X			
Lightweight Concrete			X	
Coal Tar Pitch BUR	X			
Modified Bitumen Roofs	X			
Existing Asphalt BUR	X			
Existing Single-Ply Roofs			X	
Base Sheets	X			
Insulations:				4' x 4' (1.2 m x 1.2 m) maximum size
Polyiso, Wood Fiber, Dens-Deck Products, Expanded Polystyrene Perlite, ISOGARD™ HD	X			
Extruded Polystyrene, Fiberglass			X	

Existing substrates containing residual asphalt must be cleaned and scraped smooth as possible.

The substrate must be smooth, flat, clean, dry, free of sharp fins, or foreign materials.

A Test Insulation board must be installed with I.S.O.SPRAY S on the deck prior to commencing production. The test board indicates if the adhesive is performing in actual rooftop conditions. If the test board indicates good adhesion over the total surface of the board, contractor can proceed.

If the test board does not show good adhesion, rooftop conditions (adhesive, substrate or ambient temperature; humidity etc.) may not be suitable to use I.S.O.SPRAY S on that particular workday.

All perimeters, deck seams and all penetrations must be sealed to prevent air infiltration through the deck. Firestone recommends an expanding foam or similar product be used.

Note: Dens-Deck is a registered Trademark of Georgia-Pacific.

PRECAUTIONARY INFORMATION:

- Review applicable Material Safety Data Sheets prior to use.
- Personnel who are sensitive/allergic to isocyanate or polyurethane should not work with I.S.O.Spray S Insulation Adhesive.
- Review method of application prior to use with Spray Equipment Supplier.
- Review spray equipment prior to use. Ensure that all is in good working order: generator, air compressor, mix/meter/dispense spray unit, transfer pumps, heated hoses, spray gun, etc. Ground spray unit per dispensing equipment manufacturer's requirements.
- Avoid contact with eyes and skin. Use safety glasses with side shields and gloves when handling or dispensing I.S.O.SPRAY S Insulation Adhesive. Wash thoroughly after handling.
- Avoid breathing of vapors. Wear respirators, long sleeves and long pants.
- Protect all areas subject to over-spray of the I.S.O.SPRAY S Insulation Adhesive. This includes, but is not limited to: cars parked adjacent to the building receiving the I.S.O.SPRAY S, air intakes/exhausts on the building, roof mounted HVAC units, roof drains, access hatches and windows/skylights accessible to the roof, and any other item or personnel which may be downwind from spraying the I.S.O.SPRAY S insulation adhesive. There will be days that the wind conditions, as well as temperature conditions, prevent the use of I.S.O.SPRAY S insulation adhesive. Do not attempt to spray I.S.O.SPRAY S when the wind speed exceeds 15 mph. This can be estimated by observing a flag: when a flag is wind blown to the extent that it flies approximately "straight out", the wind is too extreme to use I.S.O.SPRAY S Insulation Adhesive on that particular workday.
- Begin dispensing I.S.O.SPRAY S only when Part A and B pre-heaters have reached 135-145 °F (57-63 °C) in the mix/meter/dispense unit. Maintain 135-145 °F (57-63 °C) throughout the heated hoses.
- It is imperative that freshly installed insulation is continuously weighted until such time as the I.S.O.SPRAY S adhesive sets up and the board is held in place by the adhesive.
- Use caution when removing drum bungs as contents may develop pressure. Loosen bungs ¾" and allow gas to escape before completely removing bungs.
- Do not burn or torch-cut empty drums. Empty B component drums can be reconditioned at drum re-conditioners. Empty A (or B) component drums should be disposed of in accordance with local, state, and federal regulations.
- Install only as much roof insulation with I.S.O.Spray S insulation adhesive as can be covered and made watertight during that working day.
- Insulation boards should not exceed 4' x 4' (1.22 m x 1.22 m).
- Review Technical Information Sheet 1705, "Recommended Guidelines for Application of Roofing Adhesives to an Occupied Building."

LEED INFORMATION:

Post Consumer Recycled Content:	0%
Post Industrial Recycled Content:	0%
Manufacturing Location (A side):	New Martinsville, WV; Baytown TX
Manufacturing Location (B side):	Elwood, IL



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