Technical Information Sheet

Image Coming Soon

Twin Jet

Item Description	Item Number*
Part 1 and kit (Dispensing Accessories)	W56RACIAHFO1
Part 2	W56RACIAHFO2
Twin Jet Hose and Gun	W56RACIAPRK
Twin Jet Mixing Tips	W56RACIAPRT
Twin Jet Extension Tubes	W56RACIAPRE

**NOTE: Each item bearing an item number is sold separately.*

Description

Twin Jet is a two-component, LVOC, low-rise polyurethane adhesive applied in bead pattern for the attachment of Elevate approved roof insulations. It may also be used in bead or spatter pattern for the attachment of Elevate PVC XR, PVC KEE XR or UltraPly TPO XR Membranes to acceptable horizontal substrates, per Elevate specifications. Twin Jet is packaged in portable pressurized canisters, allowing extrusion of Part 1 and Part 2 to the gun and mix tip assembly. Use Twin Jet when ambient and substrate temperatures range from 40 °F (4 °C) to 100 °F (38 °C).

Twin Jet has been updated with an environmentally friendly HFO propellant that's compliant with all U.S. State and Canadian Provincial regulations. HFO propellants are categorized as having zero ozone depletion potential (ODP) and low global warming potential (GWP), providing a more sustainable solution compared to alternatives CFC, HCFC, and HFC propellants.

Item	Description
Part 1 and kit (Dispensing Accessories)	Part 1 in 49 lb pressurized canister, 25' (7.6 m) hose and gun assembly, six mix tips, three 17″ (432 mm) extension tubes; 9/16″ (14.3 mm) wrench; one packet O-ring lubricant
Part 1 and kit (Dispensing Accessories)	Part 1 in 45 lb pressurized canister, 25' (7.6 m) hose and gun assembly, six mix tips, three 17″ (432 mm) extension tubes; 9/16″ (14.3 mm) wrench; one packet O-ring lubricant
Part 2	Part 2 in 44 lb pressurized canister
Twin Jet Hose and Gun	25' (7.6 m) hose and gun assembly, allows dispensing Twin Jet 25' (7.6 m) from canisters. The gun assembly has a trigger lock to prevent accidental dispensing
Twin Jet Mixing Tips	10 Mixing Tips per bag
Twin Jet Extension Tubes	17″ (432 mm) extension tube that allows roofers to stand upright during application for better ergonomics and less fatigue. 10 Extension Tubes per bag

Packaging Data	
Part 1 Canister	36 lb (16.3 kg) per canister, 32 canisters per pallet. Packaged Weight: 49 lb (22.2 kg), 1568 lb (711.2 kg) per pallet **NOTE:** Package includes Canisters + Kit accessories
Part 2 Canister	31 lb (14 kg) per canister, 32 canisters per pallet. Packaged Weight: 45 lb (20.4 kg), 1440 lb (653.1 kg) per pallet **NOTE:** Package includes Canisters only

Method of Application

Twin Jet Adhesive Canister Operating Instructions

Twin Jet is dispensed in a semi-foamed bead that expands to several inches while rising ¾ to 1″ (19 to 25 mm) above the substrate. A chemical reaction occurs that secures the board in approximately 4 to 8 minutes after application, depending on temperature and weather conditions. It is important to determine the open/mate time for the ambient conditions encountered before attempting adhesion.

1. Install only as much roof insulation or membrane as can be made watertight during that working day.
2. Substrates to receive Twin Jet must be clean, smooth, dry, free of sharp edges, loose and foreign materials, oil, grease, and other contaminants.
3. Install Twin Jet only when ambient conditions, bonding substrates and insulations range from 40 °F (4 °C) to 100 °F (38 °C).
4. Determine the open/mate time relative to ambient conditions before attempting adhesion (see below).
5. Dispense a small amount of Twin Jet into a waste container to verify proper mixing and extrusion of Part 1 and Part 2 before dispensing on substrate.

Instructions for Attaching Hoses to Canisters

1. Remove hose and gun assembly from Part 1 carton.
2. Remove canisters of Part 1 and Part 2 from their carton.
3. Shake Canisters Part 1 and Part 2 back and forth 30 times to achieve the proper mix. Replace canisters Part 1 and Part 2 back in their respective cartons and insert hoses through holes in the side of each carton.
4. Attach swivel fitting on the red striped hose, finger tight, to the valve outlet on top of the Part 1 canister (red).
5. Attach fitting on the clear hose, finger tight, to the valve outlet of the Part 2 canister (white).
6. Tighten both fittings with the supplied 9/16″ (14 mm) wrench by turning an additional 1/6 turn until firmly attached. DO NOT OVER TIGHTEN! Close lid of each carton to protect from sun, wind, and dirt.

Application of Mix Tips

1. Apply lubricant to black rubber O-ring on gun.
2. Insert mix tip over O-ring on gun and snap onto the gun.
3. Extension Tubes may be attached to mix tip end to facilitate bead application of Twin Jet.

For Insulation Attachment

1. Apply Twin Jet on the substrate in 1¼″ (32 mm) beads spaced maximum 12″ (305 mm) on center or as specified to meet wind uplift requirements. Allow adhesive to reach the open/mate time (see below) and set suitable insulation boards into position.
2. Place maximum 4' x 4' (1.2 m x 1.2 m) insulation boards into Twin Jet Insulation Adhesive within the identified mate time.
3. Immediately after setting the insulation board, provide continuous pressure using weighty objects such as adhesive pails on the insulation until the adhesive sets (typically 4-8 minutes) to ensure adequate contact between the insulation, substrate, and adhesive during the critical set-up period.

FOR ELEVATE PVC XR or ULTRAPLY TPO XR MEMBRANE ATTACHMENT (Horizontal Application)

1. Unroll and position Elevate PVC XR or UltraPly TPO XR Membrane, overlapping in shingle fashion wherever possible.
2. Allow XR membrane to relax in its final intended position for a minimum of 30 minutes.
3. Back-roll the properly positioned membrane panels to expose the substrate to receive Twin Jet adhesive. (Do not "butterfly" large areas of roof membrane during adhesive application.) Take care not to move or otherwise disturb the membrane from its final intended position while back-rolling.
4. Dispense Twin Jet onto the substrate as follows:

   Bead Application: Apply Twin Jet Adhesive on the substrate in ¾" - 1" (19 mm - 25 mm) wide beads, spaced maximum 12" (305 mm) on center.

   Spatter Application: Spatter Twin Jet at a rate of 60-70% coverage over the horizontal substrate and 75-85% at base tie-in locations, 2200 ft^2 (204 m^2) to 2350 ft^2 (218 m^2) per cannister set.
5. Do not apply Twin Jet Adhesive to the roof membrane. Keep lap areas of XR membrane clean and free of Twin Jet Adhesive overspray. Remove any Twin Jet Adhesive from the seam area before mating the seam.
6. Allow the adhesive to rise in height and reach open/mate condition. Mate the Elevate PVC XR or TPO XR Membrane to the substrate before a skim coat develops on the adhesive (See Reaction Time below).
7. Immediately after setting the membrane in the Twin Jet adhesive, broom the membrane then roll thoroughly using a 75 lb (34 kg) to 150 lb (68 kg) roller. It is important that the freshly installed membrane and substrate remain in contact with the Twin Jet adhesive until the adhesive sets to ensure proper adhesion.

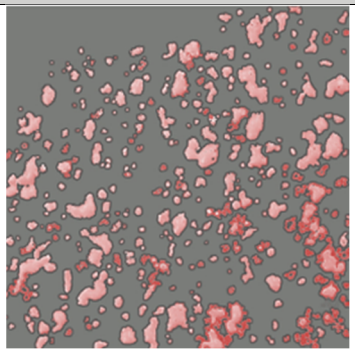
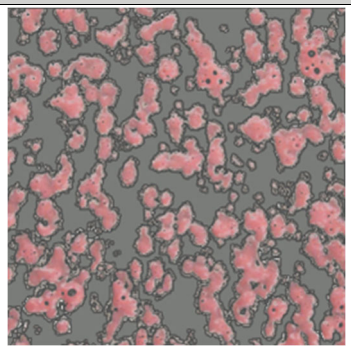
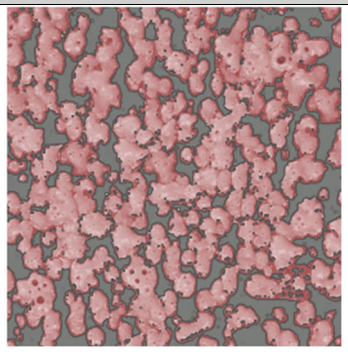
Reaction Time

- Open/mate time: The time at which long "strings" of tacky material can be pulled away from the surface of the foam when the surface is touched by the edge of a tongue blade depressor or similar implement.
- Tack-free state: The time when the upper surface of the material can be touched by a tongue blade depressor or gloved finger without sticking.
- Apply Twin Jet adhesive to the substrate when ambient and substrate temperatures range between 40 °F to 100 °F (4 °C – 38 °C).
- Surfaces must be mated after the Twin Jet Adhesive reaches open/mate time, typically 3-5 minutes, but before the adhesive reaches tack-free state, usually 8-9 minutes.

Coverage Rate

- Bead dispensed at 12″ (305 mm) o.c. – up to 3500 ft^2 (325 m^2) per canister set
- Bead dispensed at 6″ (152 mm) o.c. – up to 1750 ft^2 (162.5 m^2) per canister set
- Bead dispensed at 4″ (102 mm) o.c. – up to 1167 ft^2 (108.3 m^2) per canister set
- Spatter dispensed at 0.318 gal/sq. minimum – 2200 ft^2 (204 m^2) to 2350 ft^2 (218 m^2) per canister set.

TOO LITTLE	60-70% COVERAGE	75-85% COVERAGE

Clean-Up

Protect all surfaces in the immediate area of application from accidental contact with adhesive. Uncured foam may be cleaned off by using any commercially available polyurethane foam cleaner.

Storage

- Store in original unopened containers between 60 °F (16 °C) and 90 °F (32 °C) until ready for use.
- Do not store in direct sunlight.
- Do not allow Twin Jet to freeze.
- Store canisters with valves upright.

Shelf Life

16 months if stored in accordance with the above 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 Twin Jet.
- At the start and throughout each workday, create test samples with Twin Jet to verify proper mixing, set-up, and overall adhesion of insulation to substrate 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 during limited ventilation periods.
- Avoid contact with skin. Wear gloves when dispensing. Wash hands thoroughly after handling.
- Close canister valves when not in use.
- Do not sit or stand on cartons or canisters.
- Do not expose product to open flame or temperatures above 100 °F (38 °C).
- Canisters and contents must be brought to temperature between 70 °F (21 °C) – 90 °F (32 °C) for use.
- Insulation boards shall not exceed 4' x 4' (1.2 m x 1.2 m).
- Replace mix tip and extension tube after 30 minutes of non-use or if adhesive does not flow freely.
- Keep canisters in upright position while dispensing adhesive.
- Do not pull or lift canisters by the hoses.

Precautions Continued

- Do not dispense adhesive in areas of spark, open flame, or other ignition sources. Do not smoke in areas where Twin Jet adhesive is being applied.
- When using a full canister set, pull the trigger gradually until you reach the desired pressure. Pulling the trigger too aggressively could result in safety risk.
- Do not transfer used hoses to a new canister set to prevent cross-contamination.

Partially Used Canisters

- Turn the valves on each canister to the OFF position.
- Do not drain the chemical from the hoses.
- Slide the safety on the applicator gun into the LOCKED position.
- Remove the old mix tip, but do not discard. Clean the end of the gun to ensure the chemical exit ports are not obstructed.
- Apply fresh lubricant to the black rubber O-ring on gun. Re-attach the old mix tip, which, clogged with adhesive, will keep air and moisture out of the gun and hoses.
- After every 7 days without use, dispense a small amount of chemical to prevent crystallization from occurring in the hoses (no mix tip required for this).
- Remaining contents must be dispensed within 30 days of the date of initial use.
- Do not transfer used hoses to a new canister set to prevent cross-contamination.

Disposal

- During product disposal, wear recommended eye and skin protection. Maintain proper ventilation.
- Empty canisters completely of any remaining material.
- Add oil absorbent to waste components. Dispose of waste in an approved landfill.
- Turn empty canister upside down and open valve completely to relieve the canister of pressure.
- Once pressure is completely evacuated, locate and punch out the button on the shoulder of the canister using a non-ferrous punch.
- Empty canisters can be sent to a metal recycler or an approved landfill.
- Do not burn empty canisters. Dispose in accordance with local, federal, and state regulations.

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	Test Method	Typical Performance
Base	---	Part 1: Diisocyanate; Part 2: Polyol
Color	---	Part 1: Brown, Part 2: Red, Mixed Red
Viscosity	ASTM D2196	Part 1: 160 – 240 cPs @ 77 °F (25 °C) Part 2: 150 – 350 cPs @ 77 °F (25 °C)
Density	ASTM D1875	Part 1: 10.0 – 10.6 lb/gal (1.2 –1.27 kg/l); Part 2: 8.2 – 8.8 lb/gal (0.98 – 1.05 kg/l)
Specific Gravity	---	Part 1: 1.2 – 1.27, Part 2: 0.98 – 1.05
Weight of full canister	---	Part 1: 49± 2 lb (22.2 ± 0.9 kg); Part 2: 45± 2 lb (20.4 ± 0.9 kg)
Max Ratio (Part 1: Part 2)	---	1:1 by volume
V.O.C. Content	ASTM D2369	<25 grams/liter (0.21 lb/gal)

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 Wood Fiber Plank	Positive adhesion test required.
Existing Asphalt and Modified Bitumen Roofs (Mineral or Smooth Surfaced)	Positive adhesion test required.
V-Force™ Vapor Barrier Membrane	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	7/16" (16 mm) thick minimum
Coal Tar Pitch	Positive adhesion test required.
ISOGARD™ GL / ISO95+™ GL, ISOGARD HG / HailGard, ISOGARD CG / RESISTA™, ISOGARD HD, Structodek® wood fiberboard, 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
Existing substrates containing residual asphalt must be cleaned and scraped as 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. Elevate recommends an expanding foam or similar product be used.	

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