

Flexible FAST™ Dual Cartridge Adhesive



Overview

Carlisle's Flexible FAST Dual Cartridge Adhesive is a low-rise, VOC-free, construction-grade, two-component polyurethane adhesive that is designed to bond Carlisle's insulations and FleeceBACK® membranes to a variety of substrates. FM Approvals have been achieved over a variety of deck types and substrates.

Flexible FAST Dual Cartridge Adhesive is compatible with: polyisocyanurate insulation, EPS, extruded polystyrene, DensDeck®, SECUROCK®, OSB, SecurShield™ HD, and SecurShield HD Plus.

Compatible deck types include: concrete, cellular lightweight concrete, gypsum, cementitious wood fiber, wood, and painted or galvanized steel.

Flexible FAST Dual Cartridge Adhesive is also compatible with the following substrates for re-cover applications: smooth (previously exposed) BUR, mineral cap sheets, smooth (previously exposed) or granulated SBS mod bit, spray polyurethane foam (SPF), and Carlisle's VapAir Seal™ 725TR Air and Vapor Barrier/Temporary Roof.

Features and Benefits

- » Can be used for most re-roofing projects
- » Ideal for smaller, more cut-up projects where mobilization of large equipment is not feasible
- » Can be applied using standard-size manual, battery-operated, or pneumatic dual cartridge caulk guns
- » Provides superior wind uplift resistance
- » Application produces very little noise and odor, excellent for re-roofing occupied buildings
- » Increases puncture resistance between 33–50% compared to traditional competitive 2-component low-rise adhesives

Coverage Rate

Flexible FAST Dual Cartridge Adhesive is applied in beads or ribbons at 4", 6", or 12" on center (o.c.). Bead spacing is dependent upon several factors, including the project's wind zone, building height, and code requirements.

| Approximate Coverage Rate (Sq. Ft.) | 4" o.c. | 6" o.c. | 12" o.c. |
|-------------------------------------|---------|---------|----------|
| | 100-200 | 200-300 | 400-600 |

Each carton contains 4 sets of cartridges. Application rates may vary depending on ambient temperatures, surface, and substrate absorption rate.

Application

1. The surface upon which the adhesive is applied shall be smooth, dry, free of fins, sharp edges, loose and foreign materials, oil and grease, and standing water. All sharp projections and loose material shall be removed by sweeping, blowing, or vacuum cleaning. **Previously unweathered asphalt must be primed with CAV-GRIP™ III.**
2. Seal gaps between the wall/penetration and concrete deck with Carlisle 725TR, or other suitable material, to avoid condensation issues and positive pressure from air infiltration.
3. When re-roofing SPF roofs, all wet areas must be removed. The remaining roof surface must then be scarified or perforated (depending on the coating) before applying Flexible FAST Dual Cartridge Adhesive.
4. Proper adhesion of existing roof coatings to the substrate must be verified prior to bonding to these materials.
5. Fibrous cement decks must be investigated for their ability to retain liquid adhesive, as some types of fibrous cement may allow liquid adhesive to flow through the deck.

Insulation Attachment

1. Apply Flexible FAST Adhesive to the substrate achieving a light-blue-colored foam.
 - Apply adhesive at 4", 6", or 12" on center with a **minimum ½" wet bead**. For steel decks, extrusion of Flexible FAST must run parallel with and be on top of the steel deck flutes.

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- Place insulation boards (maximum 4' x 4' insulation boards when adhesive is extruded at 12" o.c. or when boards exceed 4" thickness, or 4' x 8' insulation boards when adhesive is applied at 4", or 6" beads) into adhesive after allowing it to rise and develop "string/body". String time will vary based on environmental conditions like temperature and humidity. Do not allow the adhesive to over-cure prior to setting insulation boards. Bead spacing guidelines for 5-, 10-, or 15-year, 55-mph warranties are listed below. Contact Carlisle's Project Review department regarding bead spacing for 20- and 30-year warranties and/or warranties with wind speeds higher than 55 mph.

| Building Height | Bead Spacing (Perimeter) | Bead Spacing (Field) |
|-------------------|-----------------------------------|----------------------|
| 0' – 25' | 6" o.c. - 4' perimeter | 12" o.c. |
| 25' – 50' | 6" o.c. - 8' perimeter | 12" o.c. |
| 50' – 75' | 6" o.c. - 12' perimeter | 12" o.c. |
| 75' – 100' | 6" o.c. - 16' perimeter | 12" o.c. |
| Greater than 100' | Contact Carlisle for requirements | |

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

- Designate one person to walk boards into place and then roll with a 150-lb. segmented roller 5 to 7 minutes from the initial adhesive application. Boards may be temporarily weighted or relief cut where necessary to keep boards in constant contact with the adhesive until adhesive is cured.
- At the beginning of the insulation attachment process and periodically throughout the day, check the adhesion of boards to ensure a tight bond has been created and maximum contact has been achieved.
- Ribbon spacing is minimum. Depending on warranty length and wind coverage, ribbon spacing may be reduced. Refer to published specification and warranty.

Review Carlisle specifications and details for complete application information.

FleeceBACK Attachment

Slide-in Method:

- Unroll FleeceBACK sheet and position. Fold the sheet back in half lengthwise (end-to-end).
- Extrude Flexible FAST Adhesive to the substrate.
 - Apply at 4", 6", or 12" on center with a **min. ½" wet bead**. Ensure end laps are protected from adhesive.
- Once "string time" occurs, gradually feed FleeceBACK sheet into Flexible FAST Adhesive, checking for "string/body" every few feet.

Stop feeding FleeceBACK sheet into adhesive when applicator reaches adhesive that has NOT developed "string/body". Immediately begin to roll membrane width-wise with a 150-lb. segmented weighted roller. Repeat process until FleeceBACK sheet is fully installed.

Roll-in (Mod Bit) Method:

- Keeping the FleeceBACK sheet on the core, position roll of FleeceBACK membrane at the designated starting point.
- Extrude Flexible FAST Adhesive to the substrate.
 - Apply at 4", 6", or 12" on center with a **min. ½" wet bead**. Ensure end laps are protected from adhesive.
- Once "string time" occurs, gradually roll FleeceBACK membrane into Flexible FAST Adhesive, checking for "string/body" every few feet. Stop rolling FleeceBACK into adhesive when applicator reaches adhesive that has NOT developed "string/body". Immediately begin to roll membrane width-wise with a 150-lb. segmented weighted roller. Repeat process until FleeceBACK sheet is fully installed.

Precautions

- Review the applicable Safety Data Sheet (SDS) for complete safety information prior to use.
- The foam produced is an organic material; it must be considered combustible and may constitute a fire hazard. The foam adhesive must not be left exposed or unprotected. Shield from heat and sparks.
- Do not smoke during application.
- Use this product with adequate ventilation. Avoid breathing vapors. Wear a NIOSH- or MSHA-approved respirator for organic vapors with prefilters and solvent-resistant cartridges if concentrations of MDI exceed the TLV or are unknown. If inhaled, remove to fresh air and administer oxygen if breathing is difficult. Consult a physician immediately. Proper safety training is essential for all persons involved in the installation process.
- Avoid contact with eyes. Safety glasses or goggles are required. If splashed in eyes, immediately flush with plenty of clean water for at least 15 minutes and contact a physician immediately.
- Avoid contact with skin. Wear long sleeves and pants. Wash thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water or corn oil. NOTE: Nitrile gloves are required when handling Part A directly.

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- » Jobsite storage temperatures in excess of 90°F (32°C) may affect product shelf life and lead to leakage around the bottom seal. When temperatures are in excess of 90°F (32°C) utilize white membrane or material to shield the cartridges from direct sunlight. Should the components be stored at temperatures lower than 55°F (13°C), restore to room temperature prior to use. Do not allow Flexible FAST Dual Cartridge Adhesive to freeze.
- » High-slope applications may require beads to be applied to the back of the insulation board on a flat surface.
- » When stopping or pausing for more than 15-30 seconds, REMOVE THE NOZZLE IMMEDIATELY from partially used cartridges. Wipe opening with a clean rag and re-install plastic stopper. When application resumes, ensure openings in each side are clear and install a new nozzle.
- » KEEP OUT OF THE REACH OF CHILDREN.

WARNING (CAUTION): Failure to remove nozzle from partially used cartridges will cause increased internal pressure upon reuse. This can cause the cartridge to rupture, which can result in personal injury.

Typical Properties and Characteristics

| Property | Part A (1) Polymeric Isocyanate | Part B (2) Polyols, Surfactants & Catalysts |
|---------------------------|------------------------------------|--|
| Viscosity (CPS @ 25°C) | 400 cps | 400 cps |
| Average Net Weight | 9.88 lbs/gal | 9.23 lbs/gal |
| Packaging | 0.2 gal (0.75 L) per cartridge | 0.2 gal (0.75 L) per cartridge |
| Mixing Ratio by Volume | 1:1 Part A to Part B | 1:1 Part A to Part B |
| Shelf Life | 1 year | 1 year |

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LEED® Information

| | |
|--------------------------------|--------------|
| Pre-consumer Recycled Content | 0% |
| Post-consumer Recycled Content | 0% |
| Manufacturing Location | Carlisle, PA |
| VOC Content | 0 g/l |

Substrate Compatibility

| Insulation/Underlayments | | Roof Decks | | Existing Roofing Materials | |
|----------------------------|------------------|--------------------------|------------------|----------------------------|----------------------|
| HP Polyiso | Yes | Concrete | Yes | Smooth BUR | Yes ⁵ |
| HP Recovery Board | Yes | Cellular Lt.Wt. Concrete | Yes | Gravel BUR | Yes ⁶ |
| Expanded Polystyrene (EPS) | Yes ¹ | NVS Lt.Wt. Concrete | Yes | Mineral Cap Sheet | Yes |
| Extruded Polystyrene | Yes ² | Gypsum | Yes | Granular Modified-Bitumen | Yes |
| New Sprayed Foam | Yes | Cementitious Wood Fiber | Yes | Smooth Modified-Bitumen | Yes |
| Scarified SPF | Yes | Plywood/OSB | Yes | Coal Tar Pitch | Yes ⁷ |
| DensDeck® | Yes | Painted Steel | Yes | Aluminum-Coated BUR | Yes ⁸ |
| Securock® | Yes | Galvanized Steel | Yes ³ | Acrylic-Coated SPF | Yes |
| Oriented Strand Board | Yes | Acoustical Steel | Yes ⁴ | Silicone-Coated SPF | Yes ⁹ |
| SecurShield® | Yes | Wood Plank | Yes | Aged EPDM, Hypalon, TPO | Yes ^{10,12} |
| | | | | Unweathered Asphalt | Yes/No ¹¹ |

1. EPS insulation cannot be used directly beneath Sure-Seal® (Black) FleeceBACK membrane unless a light-colored coating is specified. Both Sure-White™ and Sure-Weld® FleeceBACK membranes may be installed directly over minimum 1.5-lb.-density EPS; however, to obtain UL & FM codes, an overlayment of HP Recovery Board, DensDeck, Securock or HP Polyiso insulation is required.
2. For insulation attachment only.
3. For new galvanized steel decks, power-washing is necessary to remove finishing oil residue if present.
4. For acoustical steel decks, fill the flutes with fiberglass or other suitable fill insulation and tack in place with strips of duct tape 3' o.c., or other adhesive, prior to spraying the deck with Flexible FAST Adhesive.
5. Existing Smooth BUR must be Type III or IV asphalt if the (Black) FleeceBACK EPDM, FleeceBACK PVC and KEE HP, or FleeceBACK TPO membrane is to be installed directly without insulation.
6. A minimum ½" HP Recovery Board or insulation is required over properly prepared gravel BUR. FleeceBACK membrane cannot be installed directly over a gravel/slag surface.
7. An insulation providing the necessary R-value must be specified to prevent the coal tar pitch from softening. FleeceBACK membranes cannot be installed directly to coal tar pitch.
8. Any loose coatings must be removed by power-washing or by physical abrasion prior to the application of Flexible FAST Adhesive. A test installation over the aluminum-coated smooth BUR is recommended to ensure the aluminum coating is fully adhered.
9. Silicone-coated substrates must be scarified (coating removed) prior to the application of Flexible FAST Adhesive.
10. Power-washing aged EPDM, Hypalon, or TPO membrane is required prior to the application of Flexible FAST Adhesive.
11. Requires CAV-GRIP for all applications.
12. Contact Carlisle for specific requirements on TPO recover.