CARLISLE SYNTEC SYSTEMS

Flexible FAST™ Dual Tank Adhesive

HFC-FREE

Overview

Carlisle's Flexible FAST Dual Tank Adhesive is a two-component, construction-grade, low-rise polyurethane adhesive designed for bonding Carlisle's FleeceBACK® membranes and/or insulation to various substrates. Now featuring an HFO blowing agent, Flexible FAST Dual Tanks have improved characteristics compared to products that use an HFC blowing agent.

Flexible FAST Dual Tank Adhesive is compatible with: HP Recovery Board, InsulBase® Polyiso, SecurShield® Polyiso, SecurShield HD, SecurShield HD Plus, expanded polystyrene (EPS), extruded polystyrene (XPS), spray polyurethane foam (new or scarified SPF), DensDeck®, SECUROCK®, and StormBase®.

Compatible deck types include concrete, cellular lightweight concrete (LWC), gypsum, cementitious wood fiber, wood, and painted or galvanized steel. Flexible FAST Dual Tank Adhesive is also compatible with the following roofing materials: smooth (previously exposed) BUR, mineral cap sheets, smooth (previously exposed) or granulated mod bit, aged EPDM, aged Hypalon®, and Carlisle's VapAir Seal™ 725TR Air and Vapor Barrier.

Flexible FAST EU Dual Tanks meet the requirements for pressurized tanks for the European Union. The features, benefits, installation, storage, and precaution criteria listed on this PDS also apply to Flexible FAST EU Dual Tanks.

Productivity Boosting Features and Benefits:

- Reduces labor by eliminating equipment maintenance and breakdowns
- Application time reduced up to 15% when compared to low-pressure dispensing machines
- Increased productivity when Dual Tanks are used simultaneously (each additional Dual Tank can increase productivity up to 100%)

PRODUCTIVITY $ BOOSTER

Experience the New Temperature Sensing Gun (TSG)

Carlisle's Temperature Sensing Gun (TSG) provides continuous, real-time monitoring of adhesive temperature to help ensure every application is delivered at the ideal material temperature. The TSG is included with every set of Flexible FAST Dual Tank Adhesive.

The TSG delivers:

- Real-time temperature sensing that continuously monitors adhesive temperature as material flows through the gun
- Integrated Blue, Green, and Red LED indicators that provide immediate visual confirmation of proper application conditions
- Reduced risk of installation errors and material waste by clearly identifying out-of-range temperatures before application
- Up to 75% reduced trigger force and ergonomic design to minimize installer fatigue during extended use
- Improved flow control and application consistency to support uniform coverage and reliable curing

Features and Benefits

- VOC free, self-contained system
- HFO blowing agent
  - Green alternative, offering low GWPs and zero ODPs
  - Easier and more efficient splatter application; dispenses in a more uniform pattern
  - Improved coverage rates by up to 16% versus other canister based insulation and membrane adhesives
  - Improved rise and cell structure
  - Improved and more obvious string time
- Non-penetrating, low noise, low odor
- Superior wind uplift performance
- Added puncture resistance of 33 – 50% compared to competitive two-component low-rise adhesives
- Consistent elongation properties up to 150%
- FM, UL, Miami Dade and Florida building approvals

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Coverage Rate

FleeceBACK membrane or insulation attachment to lightweight concrete, concrete, plywood and OSB, plank wood, steel, smooth BUR, mod-bit, mineral cap sheets, SPF, or multiple layers of insulation:

(Application rates may vary depending on ambient temperatures, surface, and substrate absorption rate.)

Approximate Coverage Rate (Sq. Ft.)	Splatter*	4" o.c.	6" o.c.	12" o.c.
	2,600-2,800	1,100-1,300	1,700-1,900	3,500-3,700

*Dual Tank splatter approved for membrane attachment to smooth flat surfaces only. Dual Tank splatter is not approved for insulation attachment.

May vary depending on climate, temperature, humidity, and equipment. Please consult Carlisle for project-specific bead widths and spacing.

Application

Substrate Preparation

1. The surface to which adhesive is to be applied shall be dry, free of fins, protrusions, sharp edges, loose or foreign material, oil, and grease. Depressions greater than ¼" shall be filled with adhesive or other approved patching material. All sharp projections shall be removed.
2. Seal gap between the wall/penetrations and concrete deck with VapAir Seal 725TR, Flashing Foam, or other suitable material to avoid condensation or air infiltration issues.
3. Apply Flexible FAST Dual Tank Adhesive when substrate and ambient temperature are 25°F or above.
4. Bead spacing is minimum. Depending on warranty length and wind coverage, ribbon spacing may be reduced. Refer to published specification and warranty.
5. Previously unexposed asphalt must be primed with CAV-GRIP® III.

Setup

Note: When spraying the dispensing unit for the first time, or when starting a new kit, Carlisle recommends that users trigger the gun only a quarter to halfway open until the desired output and spray pattern are achieved. This allows complete control of the flow rate and spray pattern that best fit the application. The best indicator for trigger pull is to use the trigger gauge on the rear of the gun.

1. Spray gloves, long sleeves, and protective glasses should be worn during setup and dispensing.
2. Flexible FAST Dual Tanks should be between 70 to 90°F during application.
    a. In colder temperatures, it is recommended to utilize heated blankets to ensure the tanks are kept warm while dispensing the product.
3. Shake kits for 30 seconds before use. Use the provided wrench to tap on the cylinder; a “thud” or full sound means it has been appropriately shaken, and a “ting” or empty sound means the cylinder needs to be shaken more.
4. Connect the red hose to the A tank and blue hose to the B tank prior to opening tank valves.
5. Pull the battery tab to activate the temperature sensors.
6. Before attaching the static mixing tip to the dispensing unit, apply a generous amount of lithium grease to the o-ring and face of the gun. This will help prevent contamination from cured foam or chemicals and keep the sealing ports clean.
7. To attach the tip, align the three tabs and rotate ⅓ of the way until a click is felt.
8. **When applying Flexible FAST Dual Tank Adhesive as a bead, the 17" extension nozzle is required and must be attached to the end of the gun tip before dispensing adhesive. Attach the nozzle extension by rotating the extension tip onto the end of the static mixing tip.**
9. **When applying Flexible FAST Dual Tank Adhesive as a splatter application, the 17" extension nozzle should NOT be used. Splatter application can be achieved by triggering the gun from a distance of 2' to 3' off the deck. Adhesive should be dispersed using a horizontal back and forth motion, achieving 50% coverage of the substrate at 3.75 lbs/sq.**
10. Once the trigger is released, it MUST BE REACTIVATED WITHIN 15 SECONDS, or a new mixing tip must be installed. Failure to do this could result in chemical leakage, spills, or splashes which can ruin the dispensing unit and/or hoses.
11. After releasing the trigger, the safety will automatically engage to prevent accidental discharge.
12. The dispensing unit face can be kept clean by using lithium grease on the face or using a soft cloth to remove residue.
13. **Do not remove the hoses from tanks. Do not flush or clean hoses with air, water, or solvent. Removing and/or cleaning the hoses will compromise the material and dispensing gun.**

Storage

1. Close both tank valves.
2. Do not store at temperatures above 100°F or below 40°F for long periods of time.
3. The used nozzle should be removed, and the dispensing unit should be cleaned with a splice wipe to help keep outlet ports and tip o-ring clean and free from any dust, dirt, or chemicals that can affect the proper sealing of the nozzle. Do not purge adhesive from hose.
4. Apply new lithium grease to the gun face and tip o-ring.
5. Install a new static mixing tip and write the date of storage on the cylinders.

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Application of petroleum jelly to spray gun

Shaking of A-side and B-side tanks

Apply using extension nozzle

Performing the string-time test

6. Do not remove the hoses from tanks. Do not flush or clean hoses with air, water, or solvent. Removing and/or cleaning the hoses will compromise the material and the dispensing gun.

Reuse of Dispensing Unit After Storage

1. Check the face of the dispensing unit to ensure outlet ports are clear and the face of the unit is free from dirt, chemicals, or other debris. If necessary, use a soft cloth or rag to remove any cured foam or chemicals from the face of the dispensing unit. The use of lithium grease is recommended to cover the face of the dispensing unit to prevent further contamination or if chemical is accidentally leaked into this area.
2. Shake kits for 30 seconds before use.
3. Open both tank valves.
4. Apply trigger to ensure two steady streams are flowing from the dispensing gun.
5. Attach a new mixing tip.

FleeceBACK Membrane Attachment
Slide-in Method:

1. Unroll FleeceBACK sheet and position. Fold the sheet back in half lengthwise (end-to-end).
2. Dispense Flexible FAST Adhesive to the substrate.
   - For splatter applications, splatter adhesive to obtain 50% coverage. Ensure end laps are protected from adhesive.
   - For bead applications, apply at 4", 6", or 12" on center with a min. 1.5" wide foamed bead. Ensure end laps are protected from adhesive.
3. 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:

1. Keeping the FleeceBACK sheet on the core, position roll of FleeceBACK membrane at the designated starting point.
2. Dispense Flexible FAST Adhesive to the substrate.
   - For splatter applications, splatter adhesive to obtain 50% coverage. Ensure end laps are protected from adhesive.
   - For bead applications, apply at 4", 6", or 12" on center with a min. 1.5" wide foamed bead. Ensure end laps are protected from adhesive.
3. 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.

Insulation Attachment:

1. Dispense Flexible FAST Dual Tank Adhesive at the appropriate coverage rate. For steel decks, beads of adhesive must run parallel with, and be on top of, all of the flutes.
2. Place insulation boards (maximum 4' x 4' insulation boards when adhesive is dispensed 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.
3. Bead spacing parameters for 5, 10, 15, or 20-year 55-mph warranties: (Contact Carlisle Project Review for bead spacing on higher mph warranties and 30-year warranty projects).

Building Height	Bead Spacing (Perimeter)	Bead Spacing (Field)
0' – 25'	6" o.c. - 4'	12" o.c.
26' – 50'	6" o.c. - 8'	12" o.c.
51' – 75'	6" o.c. - 12'	12" o.c.
76' – 100'	6" o.c. - 16'	12" o.c.
101' or greater	6" o.c. - 24'	12" o.c.

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4. 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.

Review Carlisle specifications and details for complete application information.

Disposal Procedures:

1. Eye protection and impervious gloves MUST be worn during disposal procedures.
2. **DO NOT dispose of, puncture, or incinerate cylinder tanks while under pressure.**
3. When the job is completed or tanks are empty, pressure must be released from the tanks.
4. With the tank valves open, trigger Dual Tank gun open 100%, discharging remaining adhesive, as well as pressure and propellant, into a lined waste container.
5. After cylinders are empty of all pressure and propellant, tanks must be vented. **CAUTION: tanks could still be under pressure.**
6. Close valves and release remaining pressure from hoses. Remove hoses, flip tank upside down, and with tank valve positioned AWAY from face and others, slowly reopen tank valve and allow excess pressure and or chemical to drain into a lined waste container and allow pressure to completely vent.

   CAUTION: All pressure MUST be vented 100%. Empty tanks could contain potential vapor toxicity hazard. Provide adequate ventilation or respiratory protection (consult SDS).
7. Once cylinder is empty and vented, carefully puncture the friable disc on the top of the cylinder. Cylinders should sit for 30 minutes prior to disposal.
8. DISPOSE OF EMPTY CYLINDERS AND EXCESS CHEMICAL ACCORDING TO APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

LEED® Information

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Location	Tomball, TX

For more information on substrate compatibility, please refer to the chart found on the Flexible FAST Adhesive Product Data Sheet.

Precautions

- **Flexible FAST Dual Tank splatter application is NOT approved for walls.**
- 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 to be combustible and may constitute a fire hazard. Foam adhesive must not be left exposed or unprotected. Shield from heat and sparks.
- Do not smoke during application.
- Use 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. Proper safety training is essential for all persons involved in the application process. If inhaled, remove to fresh air and administer oxygen if breathing is difficult. Consult a physician immediately.
- Avoid contact with eyes. Safety glasses or goggles are required. If splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. 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.
- Extended storage temperatures in excess of 90°F may affect product shelf life.
- Do not store in temperatures below 40°F.
- Do not allow material to freeze.
- If the components are stored at temperatures lower than 70°F, restore to 70°F before using adhesive.
- High-slope applications require adhesive to be applied to the back of the insulation board on a flat surface.
- KEEP OUT OF THE REACH OF CHILDREN.

Typical Properties and Characteristics

	Dual Tank-A	Dual Tank-B
Base	Polymeric Isocyanate	Polyols, Surfactants, Catalyst
Average Net Weight	9.8 lbs/gal	9.3 lbs/gal
Packaging	65 lbs (29 kg)	57 lbs (26 kg)
Shelf Life	1 year	1 year

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.

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