

Viking Dual Tank Flexible FAST™ Adhesive

Viking Roofspec Supplier Code: STP901A and 901B
Version 1.0

Introduction

This Data Sheet is to serve as a reference guide for Viking Roofspec Licensed Installers who are already familiar with Viking Roofspec's systems and are responsible for Viking roof-system installations.

The following guide contains precautions, best uses and application procedures for the correct installation of Viking Dual Tank Flexible FAST™ Adhesive. Dual Tank FAST Adhesive for use with FleeceBACK membrane systems (F.B.S) and to secure P.I.R insulation boards to the supporting substrate, provides a non-penetrating system application such as WarmSpan1. This industry-leading breakthrough in urethane adhesive technology offers built-in elongation, energy-absorbing and enhances puncture and impact resistance properties when used conjunction with the FleeceBACK membrane System.

Dual Tank Flexible FAST Adhesive Parts A & B are mixed in the gun nozzle and applied to the roof substrate as a foam bead approx. 50mm (with 350mm extension nozzle) or as a splatter application. A catalytic reaction takes place, allowing the Flexible FAST Adhesive to expand to a light-blue coloured foam. FleeceBACK membrane or insulation boards are then laid into the foamed adhesive after developing "string/body" and rolled with a 70-kg roller. This will ensure either; the fibres of the fleece are embedded into the adhesive, or the insulation panels have full contact with the adhesive. Within 30 minutes Flexible FAST Adhesive cures to form a tenacious bond between the substrate and the FleeceBACK membrane or insulation boards.

Properties

Approx Coverage Per Set (Ribbon spacing PIR)	150mm rib 160m – 180m ² / 300mm rib 320m – 340m ²
Approx Coverage Per Set Splatter (FBS only)	240m ² – 260m ² to smooth flat surface only
Environment Temp	When substrate and ambient are -4°C or above
Product Application Temp	Internal adhesive temp must be 21°C during application
String Time / Tack off time	1 ^{1/2} - 3 min String time will vary based on environmental conditions like temperature and humidity
Full cure	Within 24 hours
Packaging Part A / Part B	26kg Gross (Part A) & 26kg Gross (Part B) Steel Tank
Mixing ratio	Parts A and B 1 to 1 - equal parts by volume
Substrates	Concrete, Plywood, Steel, Modified Bitumen
For use under Waterproofing membranes	Enviroclad FBS / Epiclad FBS
Storage	21°C - 32°C max
Shelf life	12 months (unopened container)
Colour	Mixed Blue
VOC Content	0 g/l

Installation

1. The surface to which adhesive is to be applied must be dry and free of protrusions, sharp edges, loose and foreign materials, oil, and grease. Depressions greater than 6 mm shall be filled with Flexible FAST Adhesive or other approved patching material. All sharp projections shall be removed. Previously unexposed asphalt must be primed with CAV-GRIP III.
2. Where Vapour barrier is required seal gaps between the substrate and all penetrations with Viking Vapour Barrier VWR725, or other suitable material, to avoid condensation issues and positive pressure from air infiltration.
3. Apply Flexible FAST Adhesive when the substrate and ambient temperatures are -4°C or above. Keep Tanks stored for use between 20°C – 30°C. Keep Tanks out of direct sunlight as adhesive may expand within the cartridge due to overheating.
4. Apply FAST Adhesive in ribbons at 150mm – 300mm on centre*.
*Refer to Viking Roofspec for project specific adhesive pattern
5. Use 150mm centres within 1.2m - 5.4m from all roof perimeters such as roof edges, gutters, parapets, pop-ups, skylights, and large penetrations. *Refer Ribbon centres excluding metal tray

Dual Tank 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 is achieved. This allows complete control of the flow rate and spray pattern that best fits the application.

1. Spray gloves, long sleeves, and protective glasses should be worn during setup and dispensing.
 2. 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 15–20 seconds before use.
 4. Connect hoses to tanks prior to opening the A and B tank valves.
 5. Before attaching the nozzle to the dispensing unit, apply a generous amount of petroleum jelly* to the face. This will help to prevent contamination by cured foam or chemicals and will help to keep the sealing ports clean. Detailed instructions for attaching the nozzle are included in packaging for A-side tanks.
 6. **When applying Flexible FAST Dual Tank Adhesive as a bead, the 350mm 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 clockwise onto the end of the gun tip.**
 7. **When applying Flexible FAST Dual Tank Adhesive as a splatter application, the 350mm extension nozzle should not be used. Splatter application can be achieved by triggering the gun from 60cm–90cm off the deck. Adhesive should be dispersed using a horizontal back and forth motion, achieving 50% coverage of the substrate.**
 8. Once the trigger is released, it **MUST BE REACTIVATED WITHIN 15 SECONDS**, or a new nozzle must be installed. Failure to do this could result in chemical leakage, spills, or splashes which can ruin the dispensing unit and/or hoses.
 9. After releasing the trigger, activate the trigger safety to prevent accidental discharge.
 10. The dispensing unit face can be kept clean by using petroleum jelly on the face or using a soft cloth to remove residue.
 11. **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 foam.**
- *Applicators are recommended to have additional petroleum jelly available to maintain a clean dispensing unit.



Shaking of A-side and B-side tanks



Application of petroleum jelly to spray gun



Apply using extension nozzle



Performing the string-time test

Storage

1. Close tank valves.
2. Do not store at temperatures above 37°C or below 4°C 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 clean and free from any dust, dirt, or chemicals that can affect the proper sealing of the nozzle. ALWAYS engage the trigger safety and close all supply valves during storage. Do not purge adhesive from hose.
4. 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 foam.

Re-use 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 petroleum jelly is recommended to cover the face of the dispensing unit to prevent further contamination or if chemical is accidentally leaked into this area.
2. Attach a new or cleaned nozzle to the dispensing unit.
3. Shake kits for 15–20 seconds before use

FleeceBACK Installation, Slide-in Method:

1. Unroll FleeceBACK sheet and position. Fold the sheet back in half lengthwise (end-to-end).
2. Apply FAST Adhesive to the substrate in ribbons at 150 – 300mm on centre with a minimum 15mm wet bead achieving a light-blue coloured foam. *Refer Ribbon centres: Extruded Wet Bead of 15mm.
3. Once “string time” occurs, gradually feed FleeceBACK sheet into Flexible FAST Adhesive, checking for “string/body” every few meters. 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 heavy segmented weighted roller. Repeat process until FleeceBACK sheet is fully installed.

Splatter application at 50% substrate coverage	
Coverage (estimate)	240 - 260m ² per Set

Roll-in (Mod Bit) Method:

1. Ensure the bitumen has been cleaned and is dry
2. Keeping the FleeceBACK sheet on the core, position roll of FleeceBACK membrane at the designated starting point.
3. 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 150mm, or 300mm on center with a min. 40mm bead. Ensure end laps are protected from adhesive.
4. Once “string time” occurs, gradually roll FleeceBACK membrane into Flexible FAST Adhesive, checking for “string/body” every meter or so. Stop rolling FleeceBACK into adhesive when applicator reaches adhesive that has NOT developed “string/body”. Immediately begin to roll membrane width wise with a 70kg segmented weighted roller. Repeat process until FleeceBACK sheet is fully installed.

*Ribbon centres: Extruded Foam Bead of 40mm		
Building Height Mt	Bead Spacing (Perimeter)	Bead Spacing (Field)
0m – 7.5m	150mm o.c. (1.2mt perimeter)	300mm o.c.
8 m– 15m	150mm o.c. (2.4mt perimeter)	300mm o.c.
16m – 22m	150mm o.c. (3.6mt perimeter)	300mm o.c.
23m +	150mm o.c. (5.4mt perimeter)	300mm o.c.
Coverage (estimate)	160 - 180m ² per Set	320 - 340m ² per Set

Insulation Installation

1. Apply Flexible FAST Adhesive foam to the substrate.
 - Refer Ribbon centres: Extruded Foam Bead of 40mm.
 - For metal-decks extrusion of FAST must run parallel with and be on top of all metal-deck ribs / flutes.
2. Place insulation boards into Flexible FAST Adhesive after adhesive rises and develops “string/body” (approx. 1 – 2 min.). 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. Designate one person to walk the insulation boards into place and then roll (with a 70kg weighted roller) the boards between 5 – 7 minutes from the initial adhesive application. Boards may be relief-cut where necessary and must be temporarily weighted to keep the boards in constant contact with the adhesive until the adhesive cures. 30 – 40mins.
4. At the beginning of the insulation attachment process and periodically throughout the day, check the adhesion of boards to ensure a tight bond is created and maximum contact is achieved. Wait a minimum of 20 minutes after board is installed before checking adhesive.

Precautions

- Flexible FAST Dual Tank Splatter application is NOT approved for walls.
- Review the Material Safety Data Sheet for complete safety information prior to use.
- The foam produced is an organic material. It must be considered as 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 with adequate ventilation. Avoid breathing vapours. Wear an approved respirator for organic vapours with prefilters and solvent resistant cartridges. If vapour 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 Flexible FAST adhesive is 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-sleeved shirts and long pants. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water.
- Permeation-resistant gloves are required when handling the material or during application.
- KEEP OUT OF THE REACH OF CHILDREN.

NOTE:

- *Jobsite storage temperatures more than 32°C may affect product shelf life. Do not store in temperatures below 4°C degrees. Should the components be stored at temperatures lower than 21°C, restore to 21°C prior to use. Do not allow Flexible FAST Adhesive to freeze (storage below -18°C for at least 3 days).*
- *It is recommended suitable heating blankets are used in cold temperatures to maintain optimal adhesive performance.*
- **CAUTION:** Heating Bands must **NOT** be used with any pressurised tanks.

Substrate Compatibility						
Insulation/Underlayments			Roof Decks		Existing Roofing Materials	
Polyiso PIR		Yes	Concrete	Yes	Mineral Cap Sheet	Yes
Expanded Polystyrene (EPS)		Yes ¹	Plywood	Yes	Granular Modified-Bitumen	Yes
Extruded Polystyrene (XPS)		Yes ¹	Wood	Yes	Smooth Modified-Bitumen	Yes
Coverboards Fibre	Gypsum	Yes	Fibrous Cement	Yes	Smooth BUR	Yes ³
DensDeck coverboard		Yes	Painted Steel	Yes	Gravel BUR	Yes ⁴
OSB		Yes	Aluminium	Yes	Aluminium-Coated BUR	Yes ⁵
			Galvanised Steel	Yes ²	Unexposed Asphalt	Yes ⁶
					Aged Rubber, TPO	Yes ⁷
					Coal Tar Pitch	Yes ⁸

1. For insulation attachment only.
2. For new galvanized steel decks, power-washing may be necessary to remove finishing oil residue if present.
3. Existing Smooth BUR must be Type III or IV asphalt if Epiclad FBS (Black) membrane is to be installed directly without insulation.
4. A minimum 10mm Coverboard or 40mm insulation is required over properly prepared gravel BUR. Fleeceback membrane cannot be installed directly over a gravel surface.
5. Any loose coatings must be removed by power-washing or by physical abrasion prior to the application of Flexible FAST Adhesive.
6. A test installation over the aluminium-coated smooth BUR is recommended to ensure the aluminium coating is fully adhered.
7. Consider using a mechanical fixing method for fixing into the substrate.
8. Requires primer coat of CAV-GRIP III for application.
9. Power-washing aged EPDM, Butyl, or TPO membrane is required prior to the application of Flexible FAST Adhesive. Contact Viking for specific requirements on TPO recover.
10. 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.

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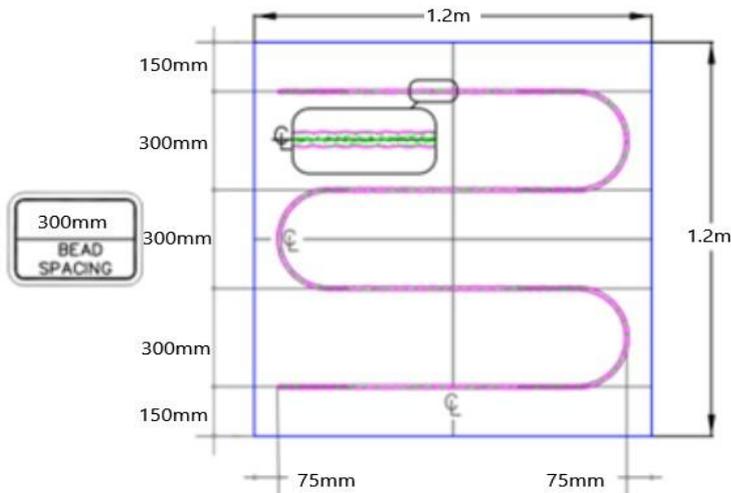
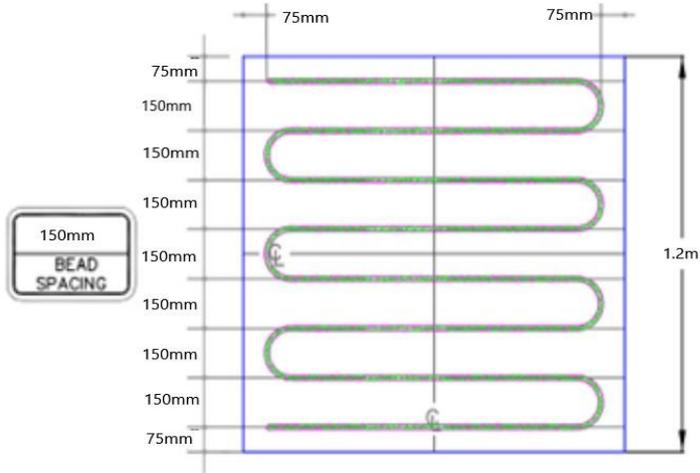
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Adhesive Ribbon Layout



-  CENTER LINE
-  GUIDE LINE
-  FOAM ADHESIVE

Flexible FAST Dual Tank Adhesive Application Video

Please refer to the link below to the instructional video of the Dual Tank FAST adhesive in action.

https://www.youtube.com/watch?v=DjXIA2_tGJw