September 2026

PRODUCT DATA SHEET

Viking FleeceBACK (FBS)
Enviroclad TPO Membrane System

Viking Roofspec Supplier Code: STP204 (GREY) & STP205 (WHITE)

Version: EVF-PDS-V1.1

Introduction:

This Data Sheet is a reference guide for Viking Roofspec Licensed Installers who are familiar with Viking Roofspec's systems. The following guide contains precautions, best uses and application procedures for the correct installation of Viking FleeceBack Enviroclad TPO Membrane System.

Enviroclad FBS membranes are manufactured using a hot-melt extrusion process for complete scrim encapsulation. Once the Enviroclad is reinforced and enhanced with fleece, the total sheet thicknesses available is 2.52mm, creating a tough, durable, and versatile sheet that is ideal for re-roofing or new construction projects.

Enviroclad FBS sheets are chlorine free and plasticizer free with excellent chemical resistance to acids, bases, restaurant oils, and greases. Enviroclad FBS membrane utilises Octaguard XT™ weathering package technology to withstand extreme durability testing intended to simulate exposure to severe climates. Enviroclad FBS advanced polymerization technology combines the flexibility of ethylene-propylene (EP) rubber with the heat weldability of polypropylene.

Enviroclad FBS membranes are intended to be used with adhered or mechanically fastened roofing systems. Enviroclad FBS is ideally suited for ballasted roofs and projects demanding superior wind uplift resistance due to its attachment with Flexible FAST Adhesive. Enviroclad FBS is also a great solution for buildings requiring low noise and odours during roofing application. Enviroclad FBS membrane can be adhered directly to new substrates of plywood, steel, concrete or to existing roofing substrates such as timber sarking, existing membranes* or substrate containing bitumen.
Enviroclad FBS membrane is adhered to substrates using Flexible FAST Adhesive on the main field areas and upstands, with alternative adhesion to upstand areas only, using Viking Sureweld or Cav-Grip III Low VOC adhesive.

*Subject to approval by a suitably qualified designer / engineer.

Properties

Product Code	Description	Colour	Thickness + Fleece	Width	Length	Weight
STP204	Enviroclad FBS	Grey	2.52mm	3.66m	30.4m	175KG
STP205	Enviroclad FBS	White	2.52mm	3.66m	30.4m	175KG

Enviroclad TPO Membrane Colour	Light Reflectance Values (L.R.V)	Solar Reflectance Index (SRI)
White	87.63%	99% *(85%)
Grey	32.70%	53% *(48%)

FleeceBACK (FBS) Enviroclad TPO Membrane Typical Properties and Characteristics			
Physical Property	Test Method	SPEC. (Min.)	FleeceBACK TPO Typicals
Tolerance on Nominal Thickness, %	ASTM D751	±10	±10
Thickness over Fleece, min 2.54 mm			1.14mm
Weight			1.6kg kg/M²
Breaking Strength, min, lbf (kN) 2.54 mm	ASTM D751 Grab Method	220 (1)	350 (1.6)
Elongation at break of internal fabric, %	ASTM D751	15	25
Tearing Strength, min, lbf (N) 2.54mm	ASTM D751 B Tongue Tear	55 (245)	100 (445)
Puncture Resistance, Joules 2.54mm	ASTM D5635	—	17.5
Puncture Resistance, lbf 2.54mm	FTM 101C Method 2031	350	450
Brittleness point, max, °C	ASTM D2137	-40	-46
Linear Dimensional Change, %	ASTM D1204	± 1 max	-0.2 typical
Field Seam Strength, lbf/in. (kN/m) ASTM D1876 tested in peel 2.54mm	ASTM D1876	25 (4.4)	50 (8.8)
Water Vapor Permeance, Perms	ASTM E96 Proc B	—	0.10 max 0.05 typical
Resistance to Microbial Surface Growth, Rating (1 is very poor, 10 is no growth)	ASTM D3274	—	9-10 typical
Properties after heat aging– ASTM D573, 670 hrs. at 240 °F Breaking strength, % retained Elongation reinf. % retained Tearing Strength, % retained Weight Change, %	ASTM D573	 — — — —	 90 min 90 min 60 min ± 1.0 max
Ozone Resistance 100 pphm, 168 hours	ASTM D1149	No cracks	No cracks
Resistance to Water Absorption After 7 days immersion @ 158°F (70°C) Change in mass, max, % (one side)	ASTM D471	± 3.0	0.90
Resistance to Outdoor (Ultraviolet) Weathering Xenon-Arc, total radiant exposure at 0.70 W/m² irradiance, 80°C black panel temp. 2.54mm	ASTM G155	No cracks No loss of breaking or tearing strength	No cracks No loss of breaking or tearing strength 17,640 kj/m²
Maximum Sustained Temperature			Not to exceed 70°C

Features and Benefits

- Superior wind uplift performance and ratings (up to an FM 1-990) due to a mechanical bond between fleece and adhesive
- Combination of Enviroclad FleeceBACK TPO membrane with Flexible FAST adhesive increases puncture resistance up to 50% compared to traditional competitive low-rise adhesives.
- 75% fewer seams than Modified Bitumen Sheet Membranes
- Fleece reinforcement adds toughness, durability, and enhanced puncture resistance. 2.52mm membrane delivers 33% greater puncture resistance and 33% greater breaking strength than 1.52mm Enviroclad TPO.
- Flexible FAST Adhesive in conjunction with the fleece allows the membrane to conform with substrate movement
- Excellent hail damage resistance
  - Passes FM's severe hail test.
  - Passes UL-2218 Class 4 rating.

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 6mm deep shall be filled with Flexible FAST Adhesive or other approved patching material.
2. Apply Flexible FAST Adhesive when the substrate and ambient temperatures are 15°C or above. *Refer to the specific Product Data Sheets for Dual Cartridge and Dual Tank storage requirements.*
3. Apply FAST Adhesive in ribbons at 150mm – 300mm on centre with cartridges or 50% substrate coverage with the Dual Tank splatter option.
4. For Dual Cartridge, use 150mm centres* within 1.2mt - 5.4mt from all roof perimeters such as roof edges, gutters, parapets, pop-ups, skylights and large penetrations.
   *Refer Ribbon centres: Extruded Wet Bead of 15mm
5. For Dual Tank coverage refer to the respective Product Data Sheet.

FleeceBACK Installation

Refer to the Dual Cartridge or Dual Tank FAST Adhesive Product Data Sheets for detailed installation instructions for the respective adhesives.

Detailing:

- Side laps: full rolls have a salvage edge without Fleece-backing to allow ease of side lap welding.
- Butt laps: Head to Tail laps: Butt FBS sheet ends (no greater than 25mm gap). Clean and Weld with 150mm wide overlay strip of naked 1.52mm Enviroclad, using Clear Cut Edge Sealer or bleed edge to seal scrim at all cut edges or penny roll the cut edge.
- External / Internal Corners Methodology: Remove Fleece 40mm from edge, pull back, scrape clean with tungsten scraper, singe balance with Hot air welder and then clean residue with Membrane Cleaner for clean 40mm weld. Follow detailing for regular Enviroclad TPO

Precautions

- Review the Material Safety Data Sheet for complete safety information prior to use.
- 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.

Storage

Handling and storage of all materials whether on or off site is under the control of the Viking Roofspec Licensed and Trained Installers. Dry storage must be provided for all products, do not let rolls get crushed under weight of stacking pallets on top of each other.

Notes

EXTREME Testing for Severe Climates ASTM Standard D6878 is the material specification for Thermoplastic Polyolefin-Based Sheet Roofing. It covers material property requirements for TPO roof sheeting and includes initial and aged properties after heat and xenon-arc exposure. As stated in the scope of the standard.

Maximum performance requires the membrane to far exceed the requirements of ASTM D6878. Heat Aging accelerates the oxidation rate that roughly doubles for each 18°F (10°C) increase in roof membrane temperature. Oxidation (reaction with oxygen) is one of the primary chemical degradation mechanisms of roofing materials. Q-Trac testing combines accelerated weathering with real-world conditions using an array of ten mirrors to reflect and concentrate full spectrum sunlight onto membrane test specimens. The Q-Trac device automatically tracks the sun's path from morning to night. Also, it adjusts to compensate for seasonal changes in the sun's altitude. Eight years in Q-Trac testing is equal to 40 years of real-world exposure. Carlisle requires its Sure-Weld TPO membranes to pass the equivalent of 40 years of exposure in the Q-Trac.