

LEXCAN

HI-TUFF TPO

Fleece-backed CA Membrane

DESCRIPTION

Lexcan Hi-Tuff TPO Fleece-backed CA Membrane is manufactured using a hot-melt extrusion process for complete scrim encapsulation. Once the TPO is reinforced and enhanced with fleece, the total sheet thicknesses available are 100, 115 and 135 mils, creating a very tough, durable and versatile sheet that is ideal for re-roofing or new construction projects. Hi-Tuff TPO Fleece-backed CA membrane is chlorine free and plasticizer free with excellent chemical resistance to acids, bases, restaurant oils and greases.

Hi-Tuff TPO Fleece-backed CA Membrane utilizes Octaguard XT™ weathering package technology to withstand extreme durability testing intended to simulate exposure to severe climates. The membrane's advanced polymerization technology combines the flexibility of ethylene-propylene (EP) rubber with the heat weldability of polypropylene.

FEATURES & BENEFITS

- **Reliable Heat-Welded Seams** - Thermofused, molecularly bonded seams offer high strength and superior reliability.
- **Fleece Reinforcement** - Adds toughness, durability and enhanced puncture resistance.
- **Excellent hail damage resistance** - Passes FM's severe hail test and UL-2218 Class 4 rating.
- **Superior Wind Uplift** - Performance and ratings (up to an FM 1-945) due to a mechanical bond between fleece and adhesive.
- **UL Class A Rated** - White grey and tan membranes.

APPLICATION

Hi-Tuff TPO Fleece-backed CA Membrane is intended to be used with adhered or mechanically fastened roofing systems. It is ideally suited for roof garden and solar panel applications and projects demanding superior wind uplift resistance due to its added toughness and durability. The membrane is also a great solution for buildings requiring low noise and odours during roofing application.

CAUTIONS & LIMITATIONS

- Use proper stacking procedures to ensure sufficient stability.
- Exercise caution when walking on wet membrane.
- UV-resistant sunglasses are required when working with Hi-Tuff TPO membranes.
- White surfaces reflect heat and may become slippery due to frost and ice accumulation.
- Care must be exercised when working close to a roof edge when the surrounding area is snow covered.

- Fleece-backed TPO membrane rolls must be tarped and elevated to keep dry prior to installation. If the fleece gets wet, use a wet vac system to help remove moisture from the fleece. **DO NOT INSTALL MEMBRANE IF FLEECE IS WET.**
- Fleece-backed TPO membrane exposed to the weather must be prepared with Lexcan Weathered Membrane Cleaner prior to hot-air welding.

INSTALLATION

Insulation is mechanically fastened or adhered with an approved adhesive to the roof deck. When adhering insulation, the adhesive is applied to the substrate and allowed to rise and foam. Once it develops string/body/gel, place insulation into the adhesive and walk it in. Roll the insulation with a 30"-wide, 150-pound weighted roller to ensure full embedment. Spray-apply or extrude adhesive to the substrate and allow foam to develop string/body/gel (typically 2 minutes) prior to setting Hi-Tuff TPO Fleece-backed CA Membrane into the adhesive. Roll membrane with a 30"-wide, 150-pound weighted roller to ensure full embedment. Splices are hot-air welded. End laps are butted and sealed with reinforced membrane or a head sheet may be utilized.

Contact Lexcan for complete installation information.

Hi-Tuff TPO Fleece-backed CA Membrane is installed by professional roofing contractors trained and approved by Lexcan. Refresher seminars are regularly held to update contractors on the latest techniques and developments.

WARRANTY

Superior installation quality and long term performance is guaranteed with comprehensive Lexguard warranty packages. To provide the best assurance of a quality installation, projects are normally inspected both during installation and after completion by a Lexcan technical representative.

TECHNICAL DATA

LEED INFORMATION

Pre-consumer Recycled Content	10%
Post-consumer Recycled Content	0%
Solar Reflectance Index	99 (white)
	86 (tan)
	53 (grey)

continued on back

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LEXCAN SINGLE PLY ROOFING SYSTEMS

Ontario and Western Canada
1 877 792.8308



Quebec and Eastern Canada
1 800 363.2307

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Physical Property	SPEC. (min.)	2.54 mm (100-mil)	2.92 mm (115-mil)	3.43 mm (135-mil)
Tolerance on Nominal Thickness ASTM D751	±10%	±10%	±10%	±10%
Thickness over Fleece, min	—	1.1 mm (45-mil)	1.5 mm (60-mil)	2.0 mm (80-mil)
Breaking strength, ASTM D751 Grab Method	1.0 kN (220 lbf)	1.6 kN (350 lbf)	2.0 kN (450 lbf)	2.2 kN (500 lbf)
Elongation break of internal fabric, ASTM D751	15%	25%	25%	25%
Tearing Strength, ASTM D751 B Tongue Tear	245 N 55 lbf	445 N 100 lbf	445 N 100 lbf	445 N 100 lbf
Brittleness Point, ASTM D2137	-40 °C (-40 °F) max	-46 °C (-50 °F)	-46 °C (-50 °F)	-46 °C (-50 °F)
Linear Dimensional Change, ASTM D1204,	± 1% max	-0.2%	-0.2%	-0.2%
Ozone Resistance, ASTM D1149, 100 ppm, 168 hrs	No cracks	No cracks	No cracks	No cracks
Water Absorption Resistance, mass ASTM D471 168 hours at 70 °C one side	± 3.0% max	0.90%	0.90%	0.90%
Field Seam Strength, ASTM D1876 tested in peel (typ.)	100 & 115-mil: 4.4 kN/m (25 lbf/in) & 135-mil: 7.0 kN/m (40 lbf/in)	8.8 kN/m (50 lbf/in) &	10.5 kN/m (60 lbf/in) min.	12.3 kN/m (70 lbf/in) min.
Water Vapour Permeance, ASTM E96 proc. B typ.	No requirement	0.05 Perms	0.05 Perms	0.05 Perms
Puncture Resistance, FTM 101C, method 2031 (typ.)	—	450 lbf	500 lbf	525 lbf
Weight	—	0.27 lbm/ft ²	0.33 lbm/ft ²	0.46 lbm/ft ²
Properties After Heat Aging, ASTM D573, 670 hours @ 116 °C (% retained)				
Breaking Strength	—	90% min.	90% min.	90% min.
Elongation Reinf.	—	90% min.	90% min.	90% min.
Tearing Strength	—	60% min.	60% min.	60% min.
Weight Change	—	± 1.0% max	± 1.0% max	± 1.0% max

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.

Radiative Properties for ENERGY STAR, Cool Roof Rating Council (CRRC) and LEED

Physical Property	Test Method	White TPO	Tan TPO	Grey TPO
ENERGY STAR – E-903 Initial solar reflectance	Solar Spectrum Reflectometer	0.79	0.71	N/A
ENERGY STAR – E-903 Solar reflectance after 3 years	Solar Spectrum Reflectometer (uncleaned)	0.70	0.64	N/A
CRRC Initial solar reflectance	ASTM C1549	0.79	0.71	0.46
CRRC Solar reflectance after 3 years	ASTM C1549 (uncleaned)	0.70	0.64	0.43
CRRC Initial thermal emittance	ASTM C1371	0.90	0.86	0.89
CRRC Thermal emittance after 3 years	ASTM C1371 (uncleaned)	0.86	0.87	0.88
LEED Thermal emittance	C1371	0.90	0.86	0.85
SRI - Solar Reflectance Index	ASTM E1980	99	86	53