

# POWERply® Endure® 100 FR

A Fire Rated, Granule Surfaced, High Tensile Fiberglass Reinforced SBS Modified Bitumen Membrane

## FEATURES

SBS elastomer enhanced with Reactive Enhanced Terpolymer (RET) and Thermoplastic Polyurethane (TPU)

Factory applied surfacing protected with Granulock™

Roof ID™ chip embedded into each roll

Antiwicking reinforcement

UL Classified

## BENEFITS

Improves durability of the modified bitumen blend

Increases granule retention to enhance longevity of the membrane

Capability to identify the membrane and its QC data over the life of the roof system

Blister Resistance

Fire Protection



## DESCRIPTION

POWERply Endure 100 FR is an asbestos free, granule surfaced, modified bitumen membrane with fire resistant characteristics. It consists of specially selected bitumens, modified with SBS rubber along with RET and urethane high performance elastomers and reinforced with an antiwicking fiberglass mat and scrim fabric. POWERply Endure 100 FR is furnished with a factory applied white granule surfacing and a clear UV cured surface treatment designed to improve granule retention.. This product exceeds the requirements of ASTM D 6163, Type III, Grade G and CSA A123.23, Type A, Grade 1. POWERply Endure 100 FR roof systems are fire rated by Underwriters Laboratories for an exterior fire hazard. Refer to UL Roofing Materials and Systems Directory for applicable system configurations.

## BASIC USES

POWERply Endure 100 FR is designed for roof membrane and flashing applications in hot applied asphalt adhesives over multi-ply systems where a high strength, fiberglass reinforced, granule surface membrane is desired. In addition, POWERply Endure 100 FR is suitable for application in cold process modified bitumen systems and flashing.

## PACKAGING

POWERply Endure 100 FR is a 3.3mm (130 mil) thick membrane. Roll covers 100 sq. ft. (9.29 m<sup>2</sup>) when applied, with roll dimensions of 3' x 38' (0.91m x 11.5m), and weighs approximately 95 lbs (43.1 kg).

POWERply Endure 100 FR is available in pallets only, with 20 rolls per pallet.

## APPLICATION

According to job specifications, prepare the surface to be covered:

Replace areas of wet insulation, deteriorated deck and wood components.

Install roof insulation or nailed base sheet and multi-ply base ply system.

Plan the placement of POWERply Endure 100 FR to ensure that water flows over or along, but not against, the exposed edges. Starting at the low point of the roof, apply adhesive uniformly and continuously according to specifications. Embed the membranes as specified. Avoid walking on plies during the placement.

For cold process applications, cut the POWERply Endure 100 FR in 16' to 18' (4.9 to 5.5 m) lengths, maximum. Allow lengths to relax for the following time length prior to installation:

Above 55° F (13° C): 30 minutes

Below 55° F (13° C): 60 minutes

For hot applications, the adhesive temperature must be at the EVT or 425° F (218° C) at the point of application, whichever is greater. THERMastic, THERMastic 80, and Premium IV Asphalt are recommended as hot applied adhesives of POWERply Endure 100 FR. Hot applied modified bitumen membranes require special application techniques under cool ambient temperatures and/or moderate wind conditions. Consult your local Tremco Roofing sales representative for specific recommendations.

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## APPLICATION CONTINUED

Place the POWERply Endure 100 FR in a uniform and continuous application of adhesive. For cold process applications press the membrane into the adhesive using a weighted roller 35-75 lbs. (16-34 kg.) to assure full contact of the back of the membrane into the adhesive..

Side laps 4" (102 mm) minimum; end laps 6" (152 mm) minimum. Hot air welding of laps is acceptable. Offset top membrane laps from the base membrane laps. Stagger end laps at least 36" (914 mm). Install flashing as specified.

## COVERAGE RATES

Hot melt interply application rate: 25 lbs/ 100ft<sup>2</sup> (1.24 kg/m<sup>2</sup>). Cold process interply application rate: 2 gal/SQ (0.8 L/m<sup>2</sup>)

## LIMITATIONS

- Not intended to perform under ponding conditions. Positive drainage required.
- Not to be exposed to solvents, oils, or other contaminants harmful to asphaltic materials
- Backnail on roofs with slopes 2:12 (2" per foot) (16.6%) or greater
- Not intended for phased construction

## PHYSICAL PROPERTIES

PROPERTY	TYPICAL VALUE	TEST METHOD
Thickness	3.3 mm (130 mils.)	ASTM D 5147
Tensile Strength @ 0°F (-18°C)	205 lbf/in MD (35.9 kN/M) 220 lbf/in XMD (38.5 kN/M)	ASTM D 5147
Elongation @ 0°F (-18°C)	5% MD 5% XMD	ASTM D 5147
Tensile Strength @ 77°F (25°C)	185 lbf/in MD (32.3 kN/M) 210 lbf/in XMD (36.7 kN/M)	ASTM D 5147
Elongation @ 77°F (25°C)	6% MD 8% XMD	ASTM D 5147
Tear Strength @ 77°F (25°C)	325 lbf MD (1445 N) 325 lbf XMD (1445 N)	ASTM D 5147
Low Temp Flex	-40° F (-40° C) MD -35° F (-37° C) XMD	ASTM D 5147
Dimensional Stability	pass	ASTM D 5147
Compound Stability @ 215°F (102°C)	pass at 302° F (150° C)	ASTM D 5147
Granule Loss	0.38g	ASTM D 5147

## PRECAUTIONS

Users must read container labels and Safety Data Sheets for health and safety precautions prior to use.

## TECHNICAL SUPPORT

Your local Tremco Representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications. The services of the Tremco Research Center, which has earned a unique reputation in weatherproofing technology, complement and extend the service of the Tremco Service Staff.



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