# POWERply® Endure™ 100 FR

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

### **FEATURES**

### BENEFITS

SBS elastomer enhanced with Reactive Enhanced Terpolymer (RET) and Thermoplastic Polyurethane (TPU) Improves durability of the modified bitumen blend

Factory applied surfacing protected with  $GranuLock^{TM}$ 

Increases granule retention to enhance longevity of the membrane

RooF-ID™ chip embedded into each roll

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

**UL** Classified

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 a combination fiberglass mat and scrim core. POWERply Endure 100 FR is furnished with a factory applied white granule surfacing. This product exceeds the requirements of ASTM D 6163, Type III, Grade G. 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 surfaced membrane is desired. In addition, POWERply Endure 100 FR is suitable for application in a cold process modified bitumen system.

## **PACKAGING**

POWERply Endure 100 FR is a 3.2mm (126 mil) thick membrane. Each Roll covers 100 sq. ft. (9.29  $m^2$ ) 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 mulit-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 ply sheet(s) as specified. Avoid walking in 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 period 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.

# POWERply® Endure™ 100 FR

**APPLICATION** 

Place the POWERply Endure 100 FR in a uniform and continuous application of adhesive. 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 membrane laps for the ply sheet laps. Stagger end laps at least 36" (914 mm). To assure complete adhesion at lap edges, adhesive should be visible past lap edges. Install flashings as specified.

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>)

- 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

**PROPERTY TYPICAL VALUE TEST METHOD** 3.3 mm (130 mils) **ASTM D 5147** Thickness **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) Elongation @ 0°F (-18°C) 5% MD **ASTM D 5147** 5%XMD Tensile Strength @ 77°F (25°C) 185 lbf/in MD (32.3 kN/M) **ASTM D 5147** 210 lbf/in XMD (36.7 kN/M) Elongation @ 77°F (25°C) 6% MD **ASTM D 5147** 8% XMD Tear Strength @ 77°F (25°C) 325 lbf MD (1445 N) **ASTM D 5147** 325 lbf XMD (1445 N) Low Temp Flex -25°F (-31° C) **ASTM D 5147 Dimensional Stability ASTM D 5147** pass Compound Stability @ 215°F (102°C) **ASTM D 5147** pass

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

Your local Tremco Roofing sales representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications.

**COVERAGE RATES** 

**LIMITATIONS** 

**PHYSICAL PROPERTIES** 

**PRECAUTIONS** 

**TECHNICAL SUPPORT** 



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# POWERply® Endure™ 100 Smooth

Smooth Surfaced, High Tensile, Fiberglass Reinforced SBS Modified Bitumen Membrane

### **FEATURES**

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

### BENEFITS

Improves the durability of the modified bitumen blend.

**UL** Classified

Fire Protection

Roof-ID™ chip embedded each roll

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







## **DESCRIPTION**

POWERply Endure 100 Smooth is an asbestos free, smooth surfaced, modified bitumen membrane. It consists of specially selected bitumens, modified with SBS rubber along with RET and urethane high performance elastomers and reinforced with a combination fiberglass mat and scrim core. POWERply Endure 100 Smooth exceeds the requirements of ASTM D 6163, Type III, Grade S. POWERply Endure 100 Smooth roof systems are fire rated by Underwriters Laboratories for an exterior fire hazard. Refer to UL Roofing Materials and Systems Directory for applicable system configuration.

### **BASIC USES**

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

### **PACKAGING**

POWERply Endure 100 Smooth is a 2.3mm (90 mil) thick membrane. A roll covers 150 sq. ft. (13.9 m²) when applied, with roll dimensions of 3' x 56'8" (0.91m x 17.3m). Each roll weighs approximately 94 lbs (42.6 kg).

POWERply Endure 100 Smooth 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 mulit-ply base ply system.

Plan the placement of POWERply Endure 100 Smooth 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 ply sheet(s) as specified. Avoid walking in plies during the placement.

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

## **APPLICATION**

# POWERply® Endure™ 100 Smooth

Place the POWERply Endure 100 Smooth in a uniform and continuous application of adhesive. Press the membrane into the adhesive using a weighted roller of 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 membrane laps for the ply sheet laps. Stagger end laps at least 36" (914 mm). To assure complete adhesion at lap edges, adhesive should be visible past lap edges. Install flashings as specified.

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>)

- 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** 2.3 mm (90 mils) **ASTM D 5147** Thickness Tensile Strength @ 0°F (-18°C) 240 lbf/in MD (42.0 kN/M) **ASTM D 5147** 240 lbf/in XMD (42.0 kN/M) Elongation @ 0° F (-18°C) 7% MD **ASTM D 5147** 7%XMD Tensile Strength @ 77°F (25°C) 190 lbf/in MD (33.2 kN/M) **ASTM D 5147** 190 lbf/in XMD (33.2 kN/M) Elongation @ 77°F (25°C) **ASTM D 5147** 7% MD 4% XMD 320 lbf MD (1423 N) Tear Strength @ 77°F (25°C) **ASTM D 5147** 320 lbf XMD (1423 N) Low Temp Flex -35°F (-37° C) **ASTM D 5147 Dimensional Stability ASTM D 5147** pass Compound Stability @ 215°F (102°C) **ASTM D 5147**

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

Your local Tremco Roofing sales representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications.

**COVERAGE RATES** 

**LIMITATIONS** 

**PRECAUTIONS** 

**TECHNICAL SUPPORT** 



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# POWERply® Endure™ 200 FR

A Fire Rated, Granule Surfaced, Polyester Reinforced SBS Modified Bitumen Membrane

### **FEATURES**

### BENEFITS

SBS elastomer enhanced with Reactive Enhanced Terpolymer (RET) and Thermoplastic Polyurethane (TPU) Improves durability of the modified bitumen blend

Factory applied surfacing protected with GranuLock™

Increases granule retention to enhance longevity of the membrane

RooF-ID™ chip embedded into each roll

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

**UL** Classified

Fire Protection







### **DESCRIPTION**

POWERply Endure 200 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 a non-woven polyester mat. It is furnished with a factory applied white granule surfacing. POWERply Endure 200 FR exceeds the requirements of ASTM D 6164, Type II, Grade G. POWERply Endure 200 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 200 FR is designed for roof membrane and flashing applications in hot applied asphalt adhesives over multi-ply systems where a high strength, polyester reinforced, granule surfaced membrane is desired. In addition, POWERply Endure 200 FR is suitable for application in a cold process modified bitumen system.

## **PACKAGING**

POWERply Endure 200 FR is a 3.8mm (150 mil) thick membrane. A roll covers 100 sq. ft. (9.29 m²) when applied, with roll dimensions of 39'-3/8" x 34'5" (1m x 10.5m). Each roll weighs approximately 109 lbs (49.4 kg).

POWERply Endure 200 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 mulit-ply base ply system.

Plan the placement of POWERply® Endure™ 200 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 ply sheet(s) as specified. Avoid walking in plies during the placement.

For cold process applications, cut the POWERply® Endure™ 200 FR in 16′ to 18′ (4.9 to 5.5 m) lengths, maximum. Allow lengths to relax for the following time period 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™ 200 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.

# POWERply® Endure™ 200 FR

**APPLICATION** 

**COVERAGE RATES** 

**LIMITATIONS** 

Place the POWERply Endure 200 FR in a uniform and continuous application of adhesive. Press the membrane into the adhesive using a weighted roller of 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 membrane laps for the ply sheet laps. Stagger end laps at least 36" (914 mm). To assure complete adhesion at lap edges, adhesive should be visible past lap edges. Install flashings as specified.

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>)

- 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** 3.8 mm (150 mils) **ASTM D 5147** Thickness Tensile Strength @ 0°F (-18°C) 165 lbf/in MD (28.8 kN/M) **ASTM D 5147** 140 lbf/in XMD (24.5 kN/M) Elongation @ 0°F (-18°C) 50% MD **ASTM D 5147** 50% XMD Tensile Strength @ 77°F (25°C) 130 lbf/in MD (22.6 kN/M) **ASTM D 5147** 110 lbf/in XMD (19.2 kN/M) Elongation @ 77°F (25°C) **ASTM D 5147** 55% MD 60% XMD Tear Strength @ 77°F (25°C) 160 lbf MD (711 N) **ASTM D 5147** 140 lbf XMD (622 N) Low Temp Flex **ASTM D 5147** -25°F (-32° C) **ASTM D 5147 Dimensional Stability** pass Compound Stability @ 215°F (102°C) **ASTM D 5147** pass

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

Your local Tremco Roofing Sales representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications.

**PRECAUTIONS** 

**TECHNICAL SUPPORT** 



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# POWERply® Endure™ 200 Smooth

Smooth Surfaced, High Elongation, Polyester Reinforced SBS Modified Bitumen Membrane

### **FEATURES**

SBS Elastomer combined with Reactive Enhanced Terpolymer (RET) and Thermoplastic Polyurethane (TPU)

### BENEFITS

Improves the durability of the modified bitumen blend

**UL** Classified

Fire Protection

Roof-ID™ chip embedded into each roll

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







## **DESCRIPTION**

POWERply Endure 200 Smooth is an asbestos free, smooth 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 a non-woven polyester mat. POWERply Endure 200 Smooth exceeds the requirements of ASTM D 6164, Type I, Grade S. POWERply Endure 200 Smooth 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 200 Smooth is designed for roofing membrane and flashing applications in hot applied asphalt adhesives over multi-ply systems where a high strength, polyester reinforced, smooth surfaced membrane is desired. In addition, POWERply Endure 200 Smooth is suitable for application in a cold process modified bitumen system.

### **PACKAGING**

POWERply Endure 200 Smooth is a 2.4mm (94 mil) thick membrane. A roll covers 150 sq. ft. (13.9  $m^2$ ) when applied, with roll dimensions of 39-3/8" x 51'6" (1m x 15.7m). Each roll weighs approximately 100 lbs (45.3 kg).

POWERply Endure 200 Smooth 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 mulit-ply base ply system.

Plan the placement of POWERply Endure 200 Smooth 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 ply sheet(s) as specified. Avoid walking in plies during the placement.

For cold process applications, cut the POWERply Endure 200 Smooth in 16' to 18' (4.9 to 5.5 m) lengths, maximum. Allow lengths to relax for the following time period 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 200 Smooth. 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.

# POWERply® Endure™ 200 Smooth

**APPLICATION** 

Place the POWERply Endure 200 Smooth in a uniform and continuous application of adhesive. 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 laps is acceptable. Offset membrane laps for the ply sheet laps. Stagger end laps at least 36" (914 mm). To assure complete adhesion at lap edges, adhesive should be visible past lap edges. Install flashings as specified.

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>)

- 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

### **PROPERTY TYPICAL VALUE** TEST METHOD 2.4 mm (94 mils) **ASTM D 5147** Thickness Tensile Strength @ 0°F (-18°C) 145 lbf/in MD (25.3 kN/M) **ASTM D 5147** 120 lbf/in XMD (21.0 kN/M) Elongation @ 0°F (-18°C) 50% MD **ASTM D 5147** 50% XMD Tensile Strength @ 77°F (25°C) 130 lbf/in MD (22.6 kN/M) **ASTM D 5147** 110 lbf/in XMD (19.2 kN/M) Elongation @ 77°F (25°C) 55% MD **ASTM D 5147** 60% XMD **ASTM D 5147** Tear Strength @ 77°F (25°C) 160 lbf MD (711 N) 130 lbf XMD (578 N) Low Temp Flex **ASTM D 5147** -25°F (-32° C) **ASTM D 5147 Dimensional Stability** pass Compound Stability @ 215°F (102°C) **ASTM D 5147** pass

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

Your local Tremco Roofing sales representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications.

**COVERAGE RATES** 

**LIMITATIONS** 

**PHYSICAL PROPERTIES** 

**PRECAUTIONS** 

**TECHNICAL SUPPORT** 

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50 Beth Nealson Drive Toronto, Ontario M4H 1M6 1.800.668.9879

# POWERply® Endure™ 300 FR

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

### **FEATURES**

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

Improves durability of the modified bitumen blend

Factory applied surfacing protected with GranuLock™ Increases granule retention to enhance longevity of the membrane

RooF-ID™ chip embedded into each roll

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

system

**UL** Classified Fire Protection







### **DESCRIPTION**

POWERply Endure 300 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 a combination polyester and fiberglass mat with a scrim core, it is furnished with a factory applied white granule surfacing. POWERply Endure 300 FR exceeds the requirements of ASTM D 6162, Type III, Grade G. POWERply Endure 300 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 300 FR is designed for roof membrane and flashing applications in hot applied asphalt adhesives over multi-ply systems where a high strength, bilaminate reinforced, granule surfaced membrane is desired. In addition, POWERply Endure 300 FR is suitable for application in a cold process modified bitumen system.

## **PACKAGING**

POWERply Endure 300 FR is a 3.7mm (146 mil) thick membrane. A roll covers 100 sq. ft. (9.29 m²) when applied, with roll dimensions of 39-3/8" x 34'5" (1m x 10.5m). Each roll weighs approximately 109 lbs (49.4 kg).

POWERply Endure 300 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 mulit-ply base ply system.

Plan the placement of POWERply Endure 300 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 ply sheet(s) as specified. Avoid walking in plies during the placement.

For cold process applications, cut the POWERply Endure 300 FR in 16' to 18' (4.9 to 5.5 m) lengths, maximum. Allow lengths to relax for the following time period 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 300 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.

# POWERply® Endure™ 300 FR

**APPLICATION** 

Place the POWERply Endure 300 FR in a uniform and continuous application of adhesive. 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 membrane laps for the ply sheet laps. Stagger end laps at least 36" (914 mm). To assure complete adhesion at lap edges, adhesive should be visible past lap edges. Install flashings as specified.

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>)

- 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

**PROPERTY TYPICAL VALUE** TEST METHOD Thickness 3.7 mm (146 mils) **ASTM D 5147** Elongation @ 0° F (-18°C) 10.0% MD **ASTM D 5147** 9.0%XMD Tensile Strength @ 0°F (-18°C) 410 lbf/in MD (71.8 kN/M) **ASTM D 5147** 370 lbf/in XMD (64.8 kN/M) Tensile Strength @ 77°F (25°C) 345 lbf/in MD (60.4 kN/M) **ASTM D 5147** 340 lbf/in XMD (59.5 kN/M) Elongation @ 77°F (25°C) ΔSTM D 5147 12.0% MD 8.0% XMD Tear Strength @ 77°F (25°C) 600 lbf MD (2668 N) **ASTM D 5147** 580 lbf XMD (2579 N) Low Temp Flex **ASTM D 5147** -35°F (-37° C) **Dimensional Stability ASTM D 5147** pass Compound Stability @ 215°F (102°C) **ASTM D 5147** 

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

Your local Tremco Roofing sales representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications.

**COVERAGE RATES** 

**LIMITATIONS** 

**PHYSICAL PROPERTIES** 

**PRECAUTIONS** 

**TECHNICAL SUPPORT** 

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# POWERply® Endure™ 300 Smooth

Smooth Surfaced, High Tensile, Bilaminate Reinforced SBS Modified Bitumen Membrane

### **FEATURES**

SBS Elastomer combined with Reactive Enhanced Terpolymer (RET) and Thermoplastic Polyurethane (TPU)

### BENEFITS

Improves the durability of the modified bitumen blend

**UL** Classified

Fire Protection

Roof-ID™ chip embedded into each roll

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







### DESCRIPTION

POWERply Endure 300 Smooth is an asbestos free, smooth 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 a high tensile polyester and fiberglass fabric. POWERply Endure 300 Smooth exceeds the requirements of ASTM D 6162, Type III, Grade S. POWERply Endure 300 Smooth 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 300 Smooth is designed for roof membrane and flashing applications in hot applied asphalt adhesives over multi-ply systems where a high strength, bilaminate reinforced, smooth surfaced membrane is desired. In addition, POWERply Endure 300 Smooth is suitable for application in a cold process modified bitumen system.

## **PACKAGING**

POWERply Endure 300 Smooth is a 2.4mm (94.5 mil) thick membrane. A roll covers 150 sq. ft. (13.9 m²) when applied, with roll dimensions of 39-3/8" x 51'6" (1m x 15.7m). Each roll weighs approximately 106 lbs (48 kg).

POWERply Endure 300 Smooth 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 mulit-ply base ply system.

Plan the placement of POWERply Endure 300 Smooth 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 ply sheet(s) as specified. Avoid walking in plies during the placement.

For cold process applications, cut the POWERply Endure 300 Smooth in 16' to 18' (4.9 to 5.5 m) lengths, maximum. Allow lengths to relax for the following time period 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 300 Smooth. 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.

# POWERply® Endure™ 300 Smooth

**APPLICATION** 

Place the POWERply Endure 300 Smooth in a uniform and continuous application of adhesive. 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 membrane laps for the ply sheet laps. Stagger end laps at least 36" (914 mm). To assure complete adhesion at lap edges, adhesive should be visible past lap edges. Install flashings as specified.

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>)

- 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

### **PROPERTY TYPICAL VALUE** TEST METHOD 2.5 mm (100 mils) **ASTM D 5147** Thickness Tensile Strength @ 0°F (-18°C) 405 lbf/in MD (70.9 kN/M) **ASTM D 5147** 390 lbf/in XMD (68.3 kN/M) Elongation @ 0°F (-18°C) 8% MD **ASTM D 5147** 9% XMD Tensile Strength @ 77°F (25°C) 355 lbf/in MD (62.1 kN/M) **ASTM D 5147** 310 lbf/in XMD (54.2 kN/M) **ASTM D 5147** Elongation @ 77°F (25°C) 16.0% MD 11.0% XMD 590 lbf MD (2624 N) Tear Strength @ 77°F (25°C) **ASTM D 5147** 590 lbf XMD (2624 N) Low Temp Flex **ASTM D 5147** -25°F (-31° C) **ASTM D 5147 Dimensional Stability** pass Compound Stability @ 215°F (102°C) **ASTM D 5147** pass

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

Your local Tremco Roofing sales representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications.

## **COVERAGE RATES**

**LIMITATIONS** 

**PHYSICAL PROPERTIES** 

**PRECAUTIONS** 

**TECHNICAL SUPPORT** 



www.tremcoroofing.com 3735 Green Road Beachwood, Ohio 44122 1.800.852.6013

50 Beth Nealson Drive Toronto, Ontario M4H 1M6 1.800.668.9879

# POWERply® Endure™ 320 FR

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

### **FEATURES**

### BENEFITS

SBS elastomer enhanced with Reactive Enhanced Terpolymer (RET) and Thermoplastic Polyurethane (TPU) Improves durability of the modified bitumen blend

Factory applied surfacing protected with GranuLock™

Increases granule retention to enhance longevity of the membrane

RooF-ID™ chip embedded into each roll

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

**UL** Classified

Fire Protection







### **DESCRIPTION**

POWERply Endure 320 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 a combination polyester and fiberglass mat with a scrim core. POWERply Endure 320 FR is furnished with a factory applied white granule surfacing. This product exceeds the requirements of ASTM D 6162, Type III, Grade G. POWERply Endure 320 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 320 FR is designed for roof membrane and flashing applications in cold applied asphalt adhesives over multi-ply systems where a high strength, bilaminate reinforced, granule surfaced membrane is desired. POWERply Endure 320 FR roof systems are fire rated by Underwriters Laboratories for an exterior fire hazard.

## **PACKAGING**

POWERply Endure 320 FR is a 3.7mm (146 mil) thick membrane. A roll covers 100 sq. ft. (9.29  $m^2$ ) when applied, with roll dimensions of 39-3/8" x 34'5" (1m x 10.5m). Each roll weighs approximately 109 lbs (49.4 kg).

POWERply Endure 320 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 mulit-ply base ply system.

Plan the placement of POWERply Endure 320 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 ply sheet(s) as specified. Avoid walking in plies during the placement.

Cut the POWERply Endure 320 FR in 16' to 18' (4.9 to 5.5 m) lengths, maximum. Allow lengths to relax for the following time period prior to installation:

Above 55° F (13° C): 30 minutes Below 55° F (13° C): 60 minutes

# POWERply® Endure™ 320 FR

**APPLICATION** 

Place the POWERply Endure 320 FR in a uniform and continuous application of adhesive. 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 membrane laps for the ply sheet laps. Stagger end laps at least 36" (914 mm). To assure complete adhesion at lap edges, adhesive should be visible past lap edges. Install flashings as specified.

Cold process interply application rate: 2 gal/SQ (0.8 L/m²)

**LIMITATIONS** 

**COVERAGE RATES** 

- 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	3.7 mm (146 mils)	ASTM D 5147
Elongation @ 0° F (-18°C)	5.0% MD 9.0%XMD	ASTM D 5147
Tensile Strength @ 0°F (-18°C)	541 lbf/in MD (94.7 kN/M) 544 lbf/in XMD (95.2 kN/M)	ASTM D 5147
Tensile Strength @ 77°F (25°C)	482 lbf/in MD (84.4 kN/M) 500 lbf/in XMD (87.5 kN/M)	ASTM D 5147
Elongation @ 77°F (25°C)	6.3% MD 6.0% XMD	ASTM D 5147
Tear Strength @ 77°F (25°C)	785 lbf MD (3490 N) 760 lbf XMD (3380 N)	ASTM D 5147
Low Temp Flex	-35°F (-37° C)	ASTM D 5147
Dimensional Stability	pass	ASTM D 5147
Compound Stability @ 215°F (102°C)	pass	ASTM D 5147

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**PRECAUTIONS** 

**TECHNICAL SUPPORT** 



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# POWERply® Endure™ 320 Smooth

Smooth Surfaced, High Tensile Bilaminate, Reinforced SBS Modified Bitumen Membrane

### **FEATURES**

SBS Elastomer combined with Reactive Enhanced Terpolymer (RET) and Thermoplastic Polyurethane (TPU)

### **BENEFITS**

Improves the durability of the modified bitumen blend

**UL** Classified

Fire Protection

Roof-ID $^{\text{TM}}$  chip embedded into each roll

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







### **DESCRIPTION**

POWERply Endure 320 Smooth is an asbestos free, smooth 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 a combination polyester and fiberglass mat with a scrim core. POWERply Endure 320 Smooth exceeds the requirements of ASTM D 6162, Type III, Grade S. POWERply Endure 320 Smooth 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 320 Smooth is designed for roof membrane and flashing applications in cold process adhesives over multi-ply systems where a high strength, bilaminate reinforced, smooth surfaced membrane is desired. POWERply Endure 320 Smooth roof systems are fire rated by Underwriters Laboratories for an exterior fire hazard.

### **PACKAGING**

POWERply Endure 320 Smooth is a 2.2mm (87 mil) thick membrane. A roll covers 150 sq. ft. (13.9 m²) when applied, with roll dimensions of 39-3/8" x 51'6" (1m x 15.7m). Each roll weighs approximately 97 lbs (44. kg).

POWERply Endure 320 Smooth 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 mulit-ply base ply system.

Plan the placement of POWERply Endure 320 Smooth 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 ply sheet(s) as specified. Avoid walking in plies during the placement.

Cut the POWERply Endure 320 Smooth in 16' to 18' (4.9 to 5.5 m) lengths, maximum. Allow lengths to relax for the following time period prior to installation:

Above 55° F (13° C): 30 minutes Below 55° F (13° C): 60 minutes

Place the POWERply Endure 320 Smooth in a uniform and continuous application of adhesive. 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 membrane laps for the ply sheet laps. Stagger end laps at least 36" (914 mm). To assure complete adhesion at lap edges, adhesive should be visible past lap edges. Install flashings as specified.

# POWERply® Endure™ 320 Smooth

**COVERAGE RATES** 

**LIMITATIONS** 

Cold process interply application rate: 2 gal/SQ (0.8 L/m²)

- Not intended to perform under ponding conditions; Positive drainage required
- · Not to be exposed to solvents, oils or other contaminants harmful to asphaltic materials

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- Backnail on roofs with slopes 2:12 (2" per foot) (16.6%) or greater
- Not intended for phased construction

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**PHYSICAL PROPERTIES** 

PROPERTY	TYPICAL VALUE	TEST METHOD
Thickness	2.2 mm (87 mils)	ASTM D 5147
Elongation @ 0° F (-18°C)	6.3% MD 5.4%XMD	ASTM D 5147
Tensile Strength @ 0°F (-18°C)	644 lbf/in MD (112 kN/M) 711 lbf/in XMD (124 kN/M)	ASTM D 5147
Tensile Strength @ 77°F (25°C)	548 lbf/in MD (96 kN/M) 590 lbf/in XMD (103 kN/M)	ASTM D 5147
Elongation @ 77°F (25°C)	6.4% MD 7.0% XMD	ASTM D 5147
Tear Strength @ 77°F (25°C)	790 lbf MD (3510 N) 880 lbf XMD (3910 N)	ASTM D 5147
Low Temp Flex	-35°F (-37° C)	ASTM D 5147
Dimensional Stability	pass	ASTM D 5147
Compound Stability @ 215°F (102°C)	pass	ASTM D 5147

**PRECAUTIONS** 

**TECHNICAL SUPPORT** 

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

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