STRESSPLY® MAX

StressPly Max | StressPly Max FR Mineral
Technical Data Sheet

OVERVIEW & FEATURES

StressPly Max membranes offer a solution for the toughest of situations, using a high-tensile reinforcement and polymer modified bitumen utilizing graphene. As a result, Garland presents a membrane with high strength, durability, fire resistance, and weatherability. StressPly Max was designed as a long-term solution for all types of new and retrofit construction.

Garland's StressPly Max has a dual polyester and fiberglass reinforcement with high-tensile values that is supported by the graphene-enriched modified bitumen. StressPly Max is formulated with Garland's additive blend called TripleBoost™, which provides superior mineral embedment and reduces thermal degradation of the finished membrane.

StressPly Max can be used as a cap ply with Garland's conventional base sheets in a 2-ply membrane system as well as in conjuction with HPR products and glass base sheets or fiberglass roofing felts. In addition, StressPly Max membranes can be used as the top ply in a two-ply flashing system. This membrane can also be used to repair splits, cracks, and other deteriorated areas in existing asphalt-based roofing systems. Specifications are available for either hot or cold applied systems.

Maximum Strength & Elongation - The strength of StressPly Max membranes comes from both the compound and the reinforcement. The graphene-modified bitumen supports the high-tensile dual fiberglass and polyester combination scrim and together forms maximum strength properties. In addition, StressPly Max membranes provide tensile strength over 1,000 pounds force per inch. By combining both strength and flexibility, StressPly Max Membranes provide long-term performance by resisting both stresses and movement created by today's high-performance buildings.

Weathering - StressPly Max's formulation includes the TripleBoost Advanced Weathering System. This additive blend allows more surface area of the mineral to embed into Garland's compound, improving mineral retention, which is proven to contribute to greater membrane longevity.

Factory-Applied Sunburst Minerals - StressPly Max FR Mineral incorporates the reflective Sunburst™ mineral, which provides long-term protection and added energy savings. The superior reflectivity of this mineral protects the membrane from UV damage and decreases roof assembly temperatures.

Superior Fire Resistance - StressPly Max membranes contain a fire retardant blend that is added to the compound during the manufacturing process. StressPly Max has a Class A fire rating over a combustible roof deck. In combination with the fire retardant, the graphene in the modified bitumen compound also works as a smoke suppressant.

APPLICATION

Hot-Applied

StressPly Max membranes can be used with ASTM D 312, Type III or IV asphalt, Garland's HPR All-Temp Asphalt or Garlastic KM Plus. Two plies of HPR Glasfelt, ASTM D 2178, Type IV or VI fiberglass felt or a Garland-approved modified base sheet are solidly bonded to the approved substrate. The StressPly Max membrane is then solidly bonded to these base layers with hot asphalt.

Cold-Applied

StressPly Max membranes can also be applied in Garland's cold-applied Weatherking® or Green-Lock® Plus Membrane Adhesive. One or two layers of heavy-duty Garland-approved modified base sheets are applied in Weatherking or Green-Lock Plus Membrane Adhesive to the approved substrate. The StressPly Max membrane is then adhered to these base sheets with Weatherking or Green-Lock Plus Membrane Adhesive.

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since 1895

Properties	StressPly Max	StressPly Max FR Mineral
Tensile Strength	MD: 1100 lbf./in. (193 kN/m) XD: 1000 lbf./in. (175 kN/m)	MD: 1100 lbf./in. (193 kN/m) XD: 1000 lbf./in. (175 kN/m)
Tear Strength	MD: 1800 lbf. (8007 N) XD: 1900 lbf. (8452 N)	MD: 1800 lbf. (8007 N) XD: 1900 lbf. (8452 N)
Elongation	MD: 15% XD: 15%	MD: 15% XD: 15%
Low Temperature Flex	-60°F (-51°C)	-50°F (-45°C)

Finished membrane meets and/or exceeds ASTM D6162, TYPE III. Test method ASTM D 5147 is tested at 2in./min @ 73.4 ± 3.6°F (50mm/min @ 23 ± 2°C).

Roll Dimensions	StressPly Max	StressPly Max FR Mineral
Width	3 ft. 3 in. (1m)	3 ft. 3 in. (1m)
Length	34 ft. 8 in. (10.60 m)	26 ft. 2 in. (7.98m)
Weight	100 lbs. (45.36 kg)	95 lbs. (43.10 kg)
Nominal Thickness	145 mils (3,683 microns)	170 mils (4318 microns)
Net Coverage	100 sq. ft. (9.29 m^2)	75 sq. ft. (6.96 m^2)
Packaging	20 rolls/pallet	20 rolls/pallet

For specific application recommendations, please contact your local Garland Representative or Garland Technical Service Department.

Installation of this product with hot oxidized asphalt may result in exposure to hazardous chemicals. Special care and attention for proper product installation must be followed in all cases. For specific details refer to the NIOSH safe handling practices in publication No. 2003-107, as well as OSHA standard 1910.134 for further exposure precautions.

ECO-FACTS

Eco-Facts	StressPly Max	StressPly Max FR Mineral
Recycled Content		
Pre-Consumer	21%	—
Post-Consumer	6%	5%
Reflectance	—	0.67 | 0.61***
Emittance	—	0.90 | 0.90***
SRI	—	82 | 74***

***Sunburst Mineral (0700-0029b) CRRC results. Rapid Ratings, 3 year aging in process.

ACCREDITATIONS

PATENT PENDING

CRRC RATED PRODUCT

0700-0029b
Sunburst Mineral on
StressPly Max FR Mineral

Garland Greenhouse®

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Tests verified by independent laboratories. Actual roof performance specifications will vary depending on test speed and temperature. Data reflects samples randomly collected. ± 10% variation may be experienced. The above data supersedes all previously published information. Consult your local Garland Representative or the home office for more information.

StressPly is a registered trademark of The Garland Company, Inc.

StressPly Max is Patent Pending.