

OVERVIEW

StressBase sheets are high-strength, puncture and fatigue resistant, rubber-modified roofing membranes that consist of fiberglass reinforcement sandwiched by Styrene-Butadiene-Styrene (SBS) rubber in a high penetration index asphalt mixture.

StressBase sheets can be used as a nailable base sheet over approved substrates, as a base flashing for hot- and cold-applied roof systems, or as an interply in Garland's hot- or cold-applied systems. StressBase is typically used in two (2) or three (3) ply modified systems and also can be used in three (3) or four (4) ply built-up roofs (BURs).

Advanced Rubber Technology – The modifier utilized in StressBase sheets is SBS (Styrene-Butadiene-Styrene). When the SBS rubber is properly dispersed throughout the high penetration asphalt, the rubber provides increased thermal shock resistance, UV penetration, heat resistance, elongation, and low temperature flexibility. To ensure proper dispersion, a special high shear mixer is used in manufacturing.

High Strength – The StressBase membranes are reinforced with fiberglass. The high-strength provided by the fiberglass scrim resists the movement created by today's modern buildings. In addition, the fiberglass scrim in StressBase membranes provide adequate tensile strength in the machine and cross machine direction. This translates to long-term resistance to splits and tears in the modified roof system.

Security in Multi-Ply Construction – StressBase sheets are the base component of a multi-ply roof system. They combine the inherent advantages and proven performance of multi-ply protection with the strength, flexibility and elongation of elastomeric systems. This unique combination minimizes dependence on perfect workmanship, contact adhesive seaming, etc.

APPLICATION

Garland's StressBase sheets can be used in conjunction with Weatherking® and Green-Lock® to make up a cold-applied system. StressBase sheets can also be used with hot asphalt or Garlastic® as a multi-ply BUR, as the underlayment for Garland's HPR® roof systems or as a base flashing ply for hot-and-cold applied roof systems. Specifications for nailing to various decks are also available.

NOTE: All rolls must be cut in 18 ft. (5.5 m) lengths and allowed to relax prior to application precautions.

Properties		CSA A123.23 Criteria: Type A, Grade 3	StressBase 80 Tested Value	
Thickness – mm (mils)		2.0 (80)	2.4 (96)	
Selvedge thickness – mm (mils)		2.0 (80)	2.5 (98)	
Mass per unit area – kg/m ² (lbs/100 ft ²)		2.2 (45)	2.7 (57)	
Back surface coating thickness (only for heat-welded sheets), min. – mm (mils)		1.0 (40)	N/A	
			Before Heat Conditioning	After Heat Conditioning
Strain energy (before and after heat conditioning), min. – kN/m (lbf/in)	At 23 ± 2°C (73.4 ± 3.6°F)	See Tested Value	MD: 2.4 (14) XMD: 2.3 (13)	MD: 1.9 (11) XMD: 1.7 (10)
	At -18 ± 2°C (-4 ± 3.6°F)	See Tested Value	MD: 1.7 (10) XMD: 1.4 (8)	MD: 2.3 (13) XMD: 1.9 (11)
Peak load (before and after heat conditioning), min. – kN/m (lbf/in)	At 23 ± 2°C (73.4 ± 3.6°F)	5.3 (30)	MD: 11 (67) XMD: 9 (55)	MD: 15 (86) XMD: 13 (73)
	At -18 ± 2°C (-4 ± 3.6°F)	12.3 (70)	MD: 20 (117) XMD: 14 (79)	MD: 22 (126) XMD: 17 (100)
Elongation at peak load (before and after heat conditioning), %	At 23 ± 2°C (73.4 ± 3.6°F)	2%	MD: 4% XMD: 5%	MD: 4% XMD: 4%
	At -18 ± 2°C (-4 ± 3.6°F)	1%	MD: 5% XMD: 5%	MD: 6% XMD: 6%
Ultimate elongation at 23 ± 2°C (before and after heat conditioning), %		3%	MD: 34% XMD: 38%	MD: 16% XMD: 18%
Dimensional stability , max., %		0.5%	0.0%	
Low temperature flexibility (before and after heat conditioning), max. – °C (°F)		See Tested Value	MD: Pass @ -40 (-40) XMD: Pass @ -40 (-40)	MD: Pass @ -18 (-0.4) XMD: Pass @ -18 (-0.4)
Low temperature flexibility after UV weathering (Grades 1 and 2 only), max. – °C (°F)		-18 (-0.4)	MD: N/A XMD: N/A	MD: N/A XMD: N/A
Compound stability , min. – °C (°F)		91 (195)	Pass @ 91 (195)	
Resistance to puncture		N/A	N/A	
Granule embedment (Grade 1 only), max. – g (oz)		N/A	N/A	
Moisture content , max., % *		N/A	N/A	

* Applicable only for APP-modified membranes



This product meets the requirements of CSA 123.23.

For more information, visit us at: www.garlandco.com

The Garland Company, Inc.
 3800 East 91st Street
 Cleveland, OH 44105
 FAX: 216-641-0633
 Phone: 216-641-7500
 Toll Free: 800-321-9336

Garland Canada Inc.
 209 Carrier Drive
 Toronto, Ontario
 Canada, M9W 5Y8
 FAX: 416-747-1980
 Phone: 416-747-7995
 Toll Free: 800-387-5991
 (Only in Canada)

The Garland Company UK, LTD
 Second Way Centre, Second Way
 Avonmouth, Bristol UK BS11 8DF
 Phone: 011 44 1174 401050 (Outside UK)
 Toll Free: 0800 328 5560 (Only in UK)

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

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Properties		CSA A123.23 Criteria: Type A, Grade 3	StressBase 120 Tested Value	
Thickness – mm (mils)		2.0 (80)	2.8 (112)	
Selvedge thickness – mm (mils)		2.0 (80)	3.0 (117)	
Mass per unit area – kg/m ² (lbs/100 ft ²)		2.2 (45)	3.6 (75)	
Back surface coating thickness (only for heat-welded sheets), min. – mm (mils)		1.0 (40)	N/A	
			Before Heat Conditioning	After Heat Conditioning
Strain energy (before and after heat conditioning), min. – kN/m (lbf/in)	At 23 ± 2°C (73.4 ± 3.6°F)	See Tested Value	MD: 3.3 (19) XMD: 2.6 (15)	MD: 1.9 (11) XMD: 1.7 (10)
	At -18 ± 2°C (-4 ± 3.6°F)	See Tested Value	MD: 1.7 (10) XMD: 1.4 (8)	MD: 2.3 (13) XMD: 1.9 (11)
Peak load (before and after heat conditioning), min. – kN/m (lbf/in)	At 23 ± 2°C (73.4 ± 3.6°F)	5.3 (30)	MD: 16 (93) XMD: 13 (74)	MD: 15 (86) XMD: 12 (73)
	At -18 ± 2°C (-4 ± 3.6°F)	12.3 (70)	MD: 20 (117) XMD: 14 (79)	MD: 22 (126) XMD: 17 (100)
Elongation at peak load (before and after heat conditioning), %	At 23 ± 2°C (73.4 ± 3.6°F)	2%	MD: 6% XMD: 6%	MD: 4% XMD: 4%
	At -18 ± 2°C (-4 ± 3.6°F)	1%	MD: 5% XMD: 5%	MD: 6% XMD: 6%
Ultimate elongation at 23 ± 2°C (before and after heat conditioning), %		3%	MD: 29% XMD: 36%	MD: 16% XMD: 18%
Dimensional stability , max., %		0.5%	0.0%	
Low temperature flexibility (before and after heat conditioning), max. – °C (°F)		See Tested Value	MD: Pass @ -40 (-40) XMD: Pass @ -40 (-40)	MD: Pass @ -18 (-0.4) XMD: Pass @ -18 (-0.4)
Low temperature flexibility after UV weathering (Grades 1 and 2 only), max. – °C (°F)		-18 (-0.4)	MD: N/A XMD: N/A	MD: N/A XMD: N/A
Compound stability , min. – °C (°F)		91 (195)	Pass @ 91 (195)	
Resistance to puncture		N/A	N/A	
Granule embedment (Grade 1 only), max. – g (oz)		N/A	N/A	
Moisture content , max., % *		N/A	N/A	

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