

# StressPly Defender Plus 4-211/4-208

Technical Data Sheet



## Product Description

StressPly Defender Plus is a high strength, polyester reinforced, SBS modified roofing membrane designed to be used in torching applications. The membrane offers not only high strength, but also a high percentage of quality blended Styrene-Butadiene-Styrene (SBS) rubber compound. StressPly Defender Plus incorporates a unique head-lap designed to offer a superior bond and weatherproofing with a 150mm mineral-free head-lap.

## Features:

- ✓ Unique Integrated Head-Lap
  - The StressPly Defender Plus membrane has been designed so the head-lap is mineral free and therefore offers a superior bond and weatherproofing with a bitumen to bitumen connection in comparison to other membranes.
- ✓ The Best Rubber Technology
  - StressPly Defender Plus has been formulated using only the highest grade of SBS rubber. The StressPly Defender Plus SBS compound ensures superior low temperature flexibility. Adequate mixing provides proper phase inversion, which optimises the rubber's performance.
- ✓ Security in Multi-Ply Applications
  - StressPly Defender Plus is the top component of a multi-ply roofing system. It combines the inherent advantages and proven performance of multi-ply protection with the strength, flexibility and elongation of elastomeric systems. This unique combination minimises dependence on perfect workmanship, contact adhesive seaming, etc.
- ✓ Superior strength
  - The StressPly Defender Plus membrane is reinforced with high strength polyester. The superior strength provided by the polyester scrim resists the movement created by today's modern buildings. In addition, the polyester scrim in StressPly Defender Plus provides tensile strength in excess of 1000 Newtons in the machine direction. This translates to long-term resistance to splits end tears in the completed StressPly Defender Plus roof system.

## Uses

StressPly Defender Plus can be used in conjunction with other Garland High Performance Roofing products and underlays. Specifications for torch applied roofing systems are available. It can also be used to repair splits; cracks or other deteriorated areas of existing asphalt based roofing systems.

## Application Instructions

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with Garland Garla-Prime. The membrane is then laid by melting the lower side with light propane gas flame. Edges shall be overlapped, always by torch, by at least 75mm on the sides and 150mm at the head laps so that waterproofing integrity is maintained.

### Technical Data

Reinforcement type:	Reinforced and stabilised non-woven polyester mat
Compound type:	Bitumen modified with thermoplastic rubber (SBS)
Surface finishing:	Upper side: coloured slate granules
Lower side:	PE film
Laying method:	For lower side finishing with polymeric films: Propane-gas light flame

If you require any further information please contact your local Garland Technical Manager.



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Properties	Norms	Unit	Value	Tolerance
<b>Physical Data</b>				
Type of compound			SBS	
Type of reinforcement			Non-woven polyester mat	
Finish upper face			Slate ganules	
Finish lower face			PE film	
Length	EN 1848-1	m	5	±1%
Width	EN 1848-1	m	1	±1%
Thickness	EN 1849-1	mm	5.2	±10%
Weight	EN 1849-1	kg/m <sup>2</sup>	6.5	±10%
<b>Mechanical Data</b>				
Water vapour transmission	EN 1931	μ = MDV	20,000	
Cold temperature flexibility	EN 1109	°C	-25	≤
Visible defects	EN 1850-1		NO	
Flow resistance	EN 1110	°C	100	≤
Tensile strength L/T	EN 12311-1	N/50mm	1000/800	±20%
Shear resistance of joint L/T	EN 12317-1	N/50mm	800/1000	±20N
Elongation at break L/T	EN12311-1	%	40/40	±15 ABS
Nail tear strength L/T	EN12310-1	N	450/450	±10%
Dimensional stability	EN 1107-1	N	-0.3/0.3	
Static puncture resistance	EN 12730	kg	20	≥
Dynamic puncture resistance	EN 12691	mm	1000	≥
Flow resistance at high temp	EN 1110	°C	100	
Softening point of bitumen	ASTM D36	°C	120	
<b>Fire Performance</b>				
Fire resistance	EN 13501-5		B <sub>ROOF(t4)</sub>	
Fire reaction	EN 13501-1		E	
<b>Application Data</b>				
Minimum application temp		°C	5	
Minimum slope		%	1.5	

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