Technical Data Sheet

HYRANGER TS

1.	**Description**	Hyranger TS is a glass-fibre reinforced SBS elastomeric modified bitumen waterproofing membrane. Minimum side lap width is 6cm shown by a white line. A second white line 16cm from the edge allows the material to be identified after installation.
2.	**Use**	A base or underlayer used as part of a multi-layer waterproofing system. Can also be used as an air and vapour control layer (AVCL) low permeability membrane to control the movement of air, water vapour and heat leakage from within the building. The choice of AVCL will depend on the degree of air and vapour pressure produced, the specified roof deck/slab and the need for a robust temporary waterproofing layer. Suitable for use in bitumen and single ply warm roof waterproofing systems.
3.	**Application method**	Installed fully bonded, with fully sealed joints, using torch-on techniques, to form a continuous layer.
4.	**Storage**	Rolls to be stored upright and away from heat.
5.	**Composition**	(Indicative).

Reinforcement (g/m²)	Glass fibre	50
Binder (g/m²)	SBS elastomer	3,200
Surface finish (g/m²)	Macroperforated film + sand	100
Under surface finish (g/m²)	Thermofusible film	10

Characteristics			**Standard**	**Units**	**Value**	**Tolerance**	
						Min	**Max**
Dimensions	**Length**		EN 1848-1	m	7	-1%	
	Width			m	1	-1%	
	Straightness			-	Pass		
	Nominal roll weight			kg	25 (7m)		
	Thickness (on finished product)		EN 1849-1	mm	2.65	±5%	
Visible defects	**New product**		EN 1850-1	-	None		
	After ageing to EN 1297			-	NA		
Adhesion of granules			EN 12039	%	NA	-	-
Resistance to tearing (nail shank)	**Longitudinal**		EN 12310-1	N			
	Cross direction						
Tensile properties: maximum tensile force	**Longitudinal**		EN 12311-1	N/50mm	250	155	
	Cross direction				250	120	
Tensile properties: elongation	**Longitudinal**		EN 12311-1	%	3	2	
	Cross direction				3	2	
Peel resistance of joint	**Maximum force**	**Selvedge**	EN 12316-1	N/50mm	NA	-	-
		End joint			NA	-	-
	Average force	**Selvedge**			NA	-	-
		End joint			NA	-	-
Shear resistance of joint	**Maximum force**	**Selvedge**	EN 12317-1	N/50mm	NA	-	-
		End joint			NA	-	-
Flexibility at low temperature	**Surface**		EN 1109	°C	-15	≤	
	Under surface				-15	≤	

Characteristics		Standard	Units	Value	Tolerance	
					Min	Max
Flow resistance at elevated temperature	New product	EN 1110	°C	100	≥	
	After ageing to EN 1296			NA	-	-
Resistance to impact		EN 12691	mm	400	≤	
Resistance to static loading		EN 12730 (A)	kg	NPD	≥	
Dimensional stability		EN 1107-1	%	0.1	≤	
Form stability under cyclic temperature change		EN 1108	%	NA		
Water vapour transmission properties	New product	EN 1931	m	240	≥	
	After ageing to EN 1296		m	240	≥	
Watertightness	New product	EN 1928	-	Pass	at 10kPa	
	After ageing to EN 1296		-	NA		
Watertightness after stretching at low temperature		EN 13897	%	NA		
Reaction to fire		EN 13501-1	-	NPD		
Resistance to root penetration		EN 13948	-	NA		
Dangerous substances consult: http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangmain.htm		-	-	None		

NA=Not applicable due to use of product.

NPD=No Performance Determined.

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