Technical Data Sheet

FORCE SA

Self Adhesive Membranes, Air & Vapour Control Layer (AVCL), Base & Underlayer

1.	**Description**	Force SA is a self-adhesive, glass-fibre reinforced SBS elastomeric modified bitumen waterproofing membrane. The under surface is covered with a peel-off film. The under surface and sidelap are self-adhesive. The width of the side lap is 7cm.
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. Force SA is suitable for use in bitumen and single ply warm roof waterproofing systems.
3.	**Application method**	Installed fully bonded, with fully sealed joints, using self-adhesive/hot air techniques to form a continuous layer. The peel-off film must be removed before installing the Force SA on to the deck or thermal insulation.
4.	**Storage**	Rolls to be stored upright and away from heat.
5.	**Composition**	(Indicative). See below.

Reinforcement (g/m²)	Glass fibre	50
Binder (g/m²)	SBS elastomer	2,200
Surface finish (g/m²)	Macroperforated film + sand	100
Under surface finish (g/m²)	Peel-off silicone film	40

Characteristics			**Standard**	**Units**	**Value**	**Tolerance**	
						Min	**Max**
Dimensions	**Length**		EN 1848-1	m	16	-1%	
	Width			m	1	-1%	
	Straightness			-	Pass		
	Nominal roll weight			kg	40		
	Thickness (on finished product)		EN 1849-1	mm	2.00	1.80	2.20
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	NA	-	-
	Cross direction				NA	-	-
Tensile properties: maximum tensile force	**Longitudinal**		EN 12311-1	N/50mm	250	200	
	Cross direction				150	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	-16	≤	
	Under surface				-16	≤	

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	NA	≤	
Resistance to static loading		EN 12730 (A)	kg	NA	≥	
Dimensional stability		EN 1107-1	%	0.1	≤	
Form stability under cyclic temperature change		EN 1108	%	NA		
Water vapour transmission properties	New product	EN 1931	-	μ=20000		
	After ageing to EN 1296		-	NA		
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		

NA=Not applicable due to use of product.
NPD=No Performance Determined.

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