

Technical Data Sheet

FORCE SOLO

Description	FORCE SOLO is a stabilised polyester reinforced polymer modified bitumen, Alpa@-mix, waterproofing membrane. Its surface is finished with coloured mineral slate chippings and minimum selvedge width is 8cm.
Use	Self-protected single layer waterproofing overlay membrane. Suitable for use on in accessible and technical access roofs on new build and refurbishment projects where increased durability and life expectancy performance are required.
Application method	Fully or partially bonded by torching on to existing self-protected waterproofing or unprimed* concrete substrates. Can also be fully bonded by torching on to Hytherm BF (bituminous faced) PUR/PIR thermal insulation and onto Hytherm MW high density mineral wool for warm roof applications. *Priming is dependent upon substrate type, condition and contamination. Please refer to Axter Ltd for further details.
Storage	Rolls to be stored upright and away from heat.
Composition	(indicative)

Reinforcement (gm/m²) :	Stabilised polyester	180
Binder (gm/m²) :	Alpa@-mix	4200
Surface finish (gm/m²) :	Mineral slates or granules	1000 1200
Under surface finish (gm/m²) :	Thermofusible film	10

Characteristics		Standards (BS)	Units	Value	Tolerance		
					Min	Max	
Dimensions	Length	EN 1848-1	m	8	-1%		
	Width		m	1	-1%		
	Straightness		-	Pass			
	Nominal roll weight		kg	47.1			
	Thickness (selvedge)	EN 1849-1	mm	4.50			
Visible defects	New product	EN 1850-1	-	None			
	After ageing to EN 1297		-	NA			
Adhesion of granules		EN 12039	%	15	0	30	
Resistance to tearing (nail shank)	Longitudinal	EN 12310-1	N	NA	-	-	
	Cross direction			NA	-	-	
Tensile properties: maximum tensile force	Longitudinal	EN 12311-1	N/50 mm	600	500	900	
	Cross direction			600	500	750	
Tensile properties: elongation	Longitudinal	EN 12311-1	%	35	25	60	
	Cross direction			35	25	60	
Peel resistance of joint	Maximum force	EN 12316-1	N/50mm	Selvedge	NA	-	-
				End joint	NA	-	-
	Average force			Selvedge	NA	-	-
				End joint	NA	-	-
Shear resistance of joint	Maximum force	EN 12317-1	N/50mm	Selvedge	600	500	750
				End joint	600	500	900
Flexibility at low temperature	Surface	EN 1109	°C	-14	≤		
	Under surface			-14	≤		
Flow resistance at elevated temperature	New product	EN 1110	°C	120	≥		
	After ageing to EN 1296			120	110	130	
Resistance to impact		EN 12691	mm	1750	≤		
Resistance to static loading		EN 12730 (A)	kg	20	≥		
Dimensional stability		EN 1107-1	%	0.3	≤		
Form stability under cyclic temperature change		EN 1108	%	NA			

Characteristics		Standards (BS)	Units	Value	Tolerance	
					Min	Max
Water vapour transmission properties	New product	EN 1931	-	μ=20000		
	After ageing to EN 1296		-	NA		
Watertightness	New product	EN 1928	-	Pass	<10kPa	
	After ageing to EN 1296		-	NA		
Watertightness after stretching at low temperature		EN 13897	%	NA		
Reaction to fire		EN 13501-1	-	PND		
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. PND=Performance not determined.

The manufacturer reserves the right to modify, at any time, the characteristics of this product.