

Technical Data Sheet

EXCEL FM Capsheet

Description	EXCEL FM is a reinforced Alpa® polymer modified self-finished bitumen waterproofing membrane. Its surface is finished with coloured ceramic granules or mineral slate chippings and its under surface with a loose silicone film. Minimum selvedge width is 100mm.
Use	<p>EXCEL FM is accredited for use as a flame free single layer waterproofing system in a mechanically fixed application on flat, zero fall and pitched roofs:</p> <ul style="list-style-type: none">- where necessary in conjunction with warm roof insulation on fully or partially bonded flat or pitched roofs with limited access or under heavy protection (eg concrete slab) on flat roofs, terraces, balconies or walkways with regular pedestrian traffic.- as a repair and refurbishment waterproofing system for existing roofs as a complete single overlay where appropriate. <p>EXCEL FM is particularly suitable for large span industrial structures.</p>
Application method	Installed either flame free using mechanical fastening technique to form a continuous layer, with self-adhesive laps and detailing; or by mechanical fastening to form a continuous layer with torch-on / hot air welded laps and detailing. The under surface is a loose silicone film, left in position when the membrane is installed over a field area, but at perimeter interfaces, the interleaf should be removed to allow naked bitumen to bond with peel stop/angle reinforcement.
Storage	Rolls to be stored upright and away from heat.
Composition	(indicative)

Reinforcement (gm/m²) :	Stabilised polyester	180
Binder (gm/m²) :	Alpa [®] -mix	3800
Surface finish (gm/m²) :	Mineral slates or granules	1000 1200
Under surface finish (gm/m²) :	Peel off silicone film	40

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	41.1			
	Thickness (selvedge)	EN 1849-1	mm	4.00	3.80	4.20	
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	200	180	300	
	Cross direction			250	230	360	
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	150	100	200
				End joint	150	100	200
	Average force			Selvedge	120	70	170
				End joint	120	70	170
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	≤		

Characteristics		Standards (BS)	Units	Value	Tolerance	
					Min	Max
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	kg	20	≥	
Dimensional stability		EN 1107-1	%	0.5	≤	
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	<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.

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