

Technical Data Sheet

EXCEL[®] FM Capsheet

1. 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 10mm.
2. Use	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: <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. Excel FM is particularly suitable for large span industrial structures.
3. 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.
4. Storage	Rolls to be stored upright and away from heat.
5. Composition	(Indicative). See below.

Reinforcement (g/m ²)	Stabilised polyester	180
Binder (g/m ²)	Alpa [®] -mix	3,800
Surface finish (g/m ²)	Mineral slates or granules	1000; 1200
Under surface finish (g/m ²)	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	EN 1849-1	kg	41			
	Thickness (on finished product)		mm	4	3.80	4.20	
Visible defects	New product	EN 1850-1	-	None			
	After ageing to EN 1297		-	NA			
Adhesion of granules		EN 12039	%	15	-	-	
Resistance to tearing (nail shank)	Longitudinal	EN 12310-1	N	200	-	-	
	Cross direction			250	-	-	
Tensile properties: maximum tensile force	Longitudinal	EN 12311-1	N/50mm	600	500	900	
	Cross direction			600	440	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	-	-
				End joint	150	-	-
	Average force			Selvedge	120	-	-
				End joint	120	-	-
Shear resistance of joint	Maximum force	EN 12317-1	N/50mm	Selvedge	600	-	-
				End joint	600	-	-
Flexibility at low temperature	Surface	EN 1109	°C	NA	≤		
	Under surface			-14	≤		
Flow resistance at elevated temperature	New product	EN 1110	°C	120	≥		
	After ageing to EN 1296			120	-	-	

Resistance to impact		EN 12691	mm	NA	≤
Resistance to static loading		EN 12730 (A)	kg	NA	≥
Dimensional stability		EN 1107-1	%	0.3	≤
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	

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.

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