Technical Data Sheet

FORCE MB 40 PY 180 TS

Description	FORCE MB 40 PY 180 TS is a stabilised polyester reinforced, SBS elastomeric modified bitumen waterproofing membrane.
Use	Top layer in an inverted roof single layer waterproofing system under site applied added protection and for underground structures.
Application method	Fully bonded, with fully sealed joints, using torch-on technique to form continuous layer.
Storage	Rolls to be stored upright and away from heat.
Composition	(indicative)

Reinforcement (g/m²) :	Stabilised polyester	180
Binder (g/m²) :	SBS elastomer	4,600
Surface finish (g/m²) :	Sand	250
Under surface finish (g/m²) :	Thermofusible film	10

Characteristics			Standards (BS)	Units	Value	Tolerance	
						Min	Max
Dimensions	Length		EN 1848-1	m	10	-1%	
	Width			m	1	-1%	
	Straightness			-	Pass		
	Nominal roll weight			kg	51.3		
	Thickness (on finished product)		EN 1849-1	mm	4.0	3.80	4.20
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/50 mm	690	500	850
	Cross direction				540	400	700
Tensile properties: elongation	Longitudinal		EN 12311-1	%	40	35	45
	Cross direction				50	35	60
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	540	400	700
		End joint			690	500	850
Flexibility at low temperature	Surface		EN 1109	°C	-16	≤	
	Under surface				-16	≤	
Flow resistance at elevated temperature	New product		EN 1110	°C	100	≥	
	After ageing to EN 1296				NA		
Resistance to impact			EN 12691	mm	1500	≤	
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	<10 kPa	
	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.