

# PRODUCT DATA SHEET

n° of certification organisation: 0679  
Year mark was 1<sup>st</sup> fixed : 2006

## FORCE 4000 FMG

### Technical ref:

▶ AT FORCE FM  
AT FORCE

### DESCRIPTION

FORCE 4000 FMG is a stabilised polyester reinforced SBS elastomeric modified bituminous waterproofing membrane, 4mm thick. Its surface is finished in mineral slate chippings or ceramic granules. The minimum selvedge width is 9cm.

### USE

Single layer cap sheet mechanically fixed along selvedge with torched laps for self-protected, inaccessible roofs. Suitable for use on profiled metal decks or decks made from timber and timber derivatives, cellular concrete or non-torchable insulation boards for new or refurbishment projects.

### APPLICATION METHOD

Torched.

### STORAGE

Rolls to be stored upright and away from heat.

### COMPOSITION

(indicative)

Reinforcement (gm/m <sup>2</sup> ) :	Stabilised polyester	180
Binder (gm/m <sup>2</sup> ) :	SBS elastomer	4,250
Surface finish (gm/m <sup>2</sup> ) :	Mineral slates	1,000
	or granules	1,200
Under surface finish (gm/m <sup>2</sup> ) :	Sand	300

### CHARACTERISTICS

CHARACTERISTICS	STANDARD(BS)	UNITS	VALUES	Tolerance		
				Min	Max	
Dimensions	EN 1848-1	Length	8	-1%		
		Width	1	-1%		
		Straightness	-	Pass		
Nominal roll weight	EN 1849-1	kg	43.7			
		Thickness (selvedge)	mm	3.90	3.80	4.20
Visible defects	EN 1850-1	New product	-	None		
		After ageing to EN 1297	-	NA		
Adhesion of granules	EN 12039	%	15	0	30	
Resistance to tearing (nail shank)	EN 12310-1	Longitudinal	200	180	260	
		Cross direction	250	230	300	
Tensile properties : maximum tensile force	EN 12311-1	Longitudinal	600	500	880	
		Cross direction	600	500	750	
Tensile properties : elongation	EN 12311-1	Longitudinal	35	25	55	
		Cross direction	35	25	60	
Peel resistance of joint	EN 12316-1	N/50mm	Maximum force	200	150	280
			Average force	160	110	240
Shear resistance of joint	EN 12317-1	N/50mm	Maximum force	600	500	880
			End joint	600	500	750
Flexibility at low temperature	EN 1109	°C	Surface	-16	≤	
			Under surface	-16	≤	
Flow resistance at elevated temperature	EN 1110	°C	New product	100	≥	
			After ageing to EN 1296	110	100	120
Resistance to impact	EN 12691	mm	20	≤		
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			
Water vapour transmission properties	EN 1931	-	New product	μ=20000		
			After ageing to EN 1296	NA		
Watertightness	EN 1928	-	New product	Pass		
			After ageing to EN 1296	NA		
Watertightness after stretching at low temperature	EN 13897	%	NA			
Reaction to fire	EN 13501-1	-	F			
Resistance to root penetration	EN 13948	-	NA			
Dangerous substances consult : <a href="http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangmain.htm">http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangmain.htm</a>	-	-	None			

NA=not applicable due to use of product.

The manufacturer reserves the right to modify, at any time, the characteristics of its products.