

# PRODUCT DATA SHEET

## FORCE 4000 DALLE

### DESCRIPTION

→ *FORCE 4000 DALLE is a stabilised polyester reinforced, SBS elastomeric modified bituminous waterproofing membrane. Both surfaces are finished with a film. The surface is marked with a line 10cm from the edge to help with positioning of laps.*

### USE

→ *Top layer in single or multi-layer waterproofing systems for flat roofs: inaccessible with added protection; accessible to foot traffic and protected by paving slabs on supports, brick pavers, etc.*

### 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	4,500
Surface finish (gm/m <sup>2</sup> ) :	Thermofusible film	10
Under surface finish (gm/m <sup>2</sup> ) :	Thermofusible film	10

### CHARACTERISTICS

	STANDARD(BS)	UNITS	VALUES	Tolerance		
				Min	Max	
Dimensions	EN 1848-1	Length	8	-1%		
		Width	1	-1%		
		Straightness	Pass			
	EN 1849-1	Nominal roll weight	40.0			
		Thickness (on finished product)	4.00	3.80	4.20	
Visible defects	EN 1850-1	New product	None			
		After ageing to EN 1297	NA			
Adhesion of granules	EN 12039	%	NA	-	-	
Resistance to tearing (nail shank)	EN 12310-1	Longitudinal	240	200	280	
		Cross direction	280	210	350	
Tensile properties : maximum tensile force	EN 12311-1	Longitudinal	600	500	880	
		Cross direction	600	600	650	
Tensile properties : elongation	EN 12311-1	Longitudinal	35	25	55	
		Cross direction	35	25	60	
Peel resistance of joint	EN 12316-1	Maximum force	Selvage	NA	-	-
			End joint	NA	-	-
		Average force	Selvage	NA	-	-
			End joint	NA	-	-
Shear resistance of joint	EN 12317-1	Maximum force	Selvage	600	600	650
			End joint	600	500	880
Flexibility at low temperature	EN 1109	Surface	-16		≤	
		Under surface	-16		≤	
Flow resistance at elevated temperature	EN 1110	New product	100		≥	
		After ageing to EN 1296	NA			
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	<10 kPa	
		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.