

# Technical Data Sheet

## FORCE 4000 TRAFIC FLAME FREE

<b>1. Description</b>	Force 4000 Traffic Flame Free is a stabilised polyester reinforced, SBS elastomeric modified bitumen waterproofing membrane treated with anti-root additive. The membrane has a self protected natural slate mineral granule finish and a self adhesive under surface. Minimum selvedge width is 8cm.
<b>2. Use</b>	Capsheet in warm roof, multilayer bitumen membrane waterproofing systems for living roofs (Cityflor Neo-Bitumen® flame free) or underground structures. It can also be used as a top layer with added bitumen-based protection (mastic asphalt/macadam) to waterproof terraces with vehicular access.
<b>3. Application Method</b>	Fully bonded, with fully sealed joints, by flame free self adhesive hot air welding technique to form a continuous layer.
<b>4. Storage</b>	Rolls to be stored upright and away from heat.
<b>5. Composition</b>	(Indicative). See below.

<b>Reinforcement (g/m<sup>2</sup>) :</b>	Woven non-woven polyester reinforced with glass-fibre
<b>Binder (g/m<sup>2</sup>) :</b>	Anti-root SBS elastomer
<b>Surface finish (g/m<sup>2</sup>) :</b>	Mineral granules
<b>Under surface finish (g/m<sup>2</sup>) :</b>	Peel-off Silicone film

Characteristics		Standards (BS)	Units	Value	Tolerance	
					Min	Max
Dimensions	Length	EN 1848-1	m	8	MLV	
	Width		m	1	MLV	
	Straightness		mm	20mm x 10m	Pass	
Visible defects		EN 1850-1	-	Without defects		
Adhesion of granules		EN 12039	%	30 max.	MDV	
Self adhesion properties		ASTM D 1000	N/10mm	20	-5	
Resistance to tearing (nail shank)	Longitudinal	EN 12310-1	N	200	-30%	
	Cross direction			200		
Tensile properties: maximum tensile force	Longitudinal	EN 12311-1	N/50mm	1200	±20%	
	Cross direction			960		
Tensile properties: elongation	Longitudinal	EN 12311-1	%	45	-15 absolute	
	Cross direction			50		
Shear resistance of joint	Maximum force	EN 12317-1	N/50mm	1000	±20%	
				Selvage		
Flexibility at low temperature	New product	EN 1109	°C	-25	MLV	
	After ageing to EN 1296	EN 1297 / EN 1296		-15	+15	
Flow resistance at elevated temperature		EN 1110	°C	100	MLV	
Resistance to impact		EN 12691	mm	1250	MLV	
Resistance to static loading		EN 12730 (A)	kg	25	MLV	

Dimensional stability	Longitudinal	EN 1107-1 (A)	%	±0.3	MLV
	Cross direction				
Watertightness (A)		EN 1928	kPa	500	MLV
External fire performance		EN 13501-5	Class	F Roof	NPD
Reaction to fire		EN 13501-1	Class	E	Pass
Resistance to root penetration		EN 13948	-	Pass	

NA=not applicable due to use of product.

NPD=No performance determined.

MLV=Manufacturer limiting value.

MDV=Manufacturer declared value.

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

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