Technical Data Sheet

FORCE 4000 S

1.	**Description**	Force 4000 S is a stabilised polyester reinforced, SBS elastomeric modified bitumen waterproofing membrane. Its surface is finished with mineral slate chippings or ceramic granules. Minimum selvedge width is 8cm..
2.	**Use**	BBA certified for use as cap sheet in mulitlayer waterproofing system on flat/pitched roofs with limited access, and in exposed and protected roof specifications. Suitable for profiled metal decks, decks made from timber/timber derivatives, concrete and cellular concrete roof slab and non-torchable insulation boards for new/refurbishment projects.
3.	**Application Method**	Fully or partially bonded, with fully sealed joints,using torch-on techniques to form continuous layer.
4.	**Storage**	Rolls to be stored upright and away from heat.
5.	**Composition**	(Indicative). See below.

Reinforcement (g/m²) :	Stabilised polyester	180
Binder (g/m²) :	SBS elastomer	3,800
Surface finish (g/m²) :	Mineral slates; granules	1000; 1200
Under surface finish (g/m²) :	Thermofusible film	10

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	42	20.5	23.3
	Thickness (on finished product)			mm	4	2.50	2.80
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	NA	-	-
	Cross direction				NA	-	-
Tensile properties: maximum tensile force	Longitudinal		EN 12311-1	N/50mm	600	500	900
	Cross direction				600	500	750
Tensile properties: elongation	Longitudinal		EN 12311-1	%	35	25	60
	Cross direction				35	25	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	600	500	-
		End joint			600	500	-
Flexibility at low temperature	Surface		EN 1109	°C	NA	≤	
	Under surface				-15	≤	
Flow resistance at elevated temperature	New product		EN 1110	°C	100	≥	
	After ageing to EN 1296				100	-	-
Resistance to impact			EN 12691	mm	700	≤	
Resistance to static loading			EN 12730 (A)	kg	20	≥	
Dimensional stability			EN 1107-1	%	0.5	≤	
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.

Axter Ltd reserves the right to modify and update this data at any time without prior notice. Only the latest version of this document is valid, available for download at www.axter.co.uk/downloads. Once downloaded, documents are uncontrolled. Users should always confirm they are referring to the latest version prior to use. Further assistance is available from Axter Ltd's Technical Support Team, email: technical@axterltd.co.uk, telephone: 01473 935008.

The intended use of this product should be verified with Axter Ltd prior to adoption to ensure its suitability and compliance with specifications, project requirements, industry regulations, legislation, good practice, installation techniques and all other relevant guidance. Axter Ltd accepts no liability for non-compliant use of this product.