

Technical Data Sheet

COLETANCHE ES 4 Geomembranes

Presentation	COLETANCHE ES 4 is an SBS elastomeric modified bitumenn geomembrane with Ring and Ball melting point of 115°C (to EN 1427).
Utilisation	Extreme level of mechanical resistance. Coletanche ES 4 is used as an environmental protection geomembrane and for groundworks waterproofing (aggressive materials, reinforced elements), in particular for: Railways, directly under ballast Dams Product use must be validated by Axter.
Mise en oeuvre	By torch welding or similar technique.
Stockage	Rolls must not be stored directly on the ground. Provide suitable supports (blocks, slides, wooden planks) with a minimum height of 35cm, to be placed under the ends of the mandrel.
Composition	Indicative. See below.

Reinforcement (g/m ²) :	Glass-fibre	50
Reinforcement (g/m ²) :	Non-woven geotextile	400
Binder (g/m ²) :	Elastomeric SBS	5400
Surface finish(g/m ²) :	Sand	250
Under surface finish	Polyester anti-root film	15

Characteristics		Standards (BS)	Units	Values	Min Tolerance
Dimensions	Length	EN 1848-1	m	55	54
	Width		m	5.10	5.01
	Nominal roll weight	EN 1849-1	kg	2000.0	
	Thickness (on finished product)	EN 1849-1	mm	5.6	4.8
	Surface mass	EN 1849-1	mm	6.40	5.90
Resistance to tearing (nail shank)	Longitudinal	EN 12310-1	N	550	450
	Cross direction			600	500
Tensile properties: maximum tensile force	Longitudinal	EN 12311-1	N/50 mm	1600	1150
	Cross direction			1400	1000
Tensile properties: elongation	Longitudinal	EN 12311-1	%	45	30
	Cross direction			45	30
Flexibility at low temperature		EN 1109	°C	-20	-15
Static Puncture	Resistance	EN ISO 12236	kN	4	3.5
	Move		mm	50	40
Water permeability (liquid tightness)		EN 14150	m ³ /m ² /j	<1.10 ⁻⁷	
Gas permeability (gas tightness)		ASTM D 1434-82	m ³ /m ² /j/atm	<3.10 ⁻¹⁴	
Dangerous substances consult : http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangmain.htm				None	

DURABILITY

Characteristics		Standards (BS)	Units	Values	Min Tolerance	
Oxidation	Tensile strength according to EN 12311-1 retained tensile strength according to EN 12226	Maximum tensile strength	EN 14575	%	100	75
		Elongation			100	75
Weathering		Maximum tensile strength	EN 12224	%	100	75
		Elongation			100	75
Root penetration		EN 14416	-	Pass		

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