

**PRODUCT DATA SHEET**

**COLETANCHE ES 4 HFA**

**DESCRIPTION**

COLETANCHE ES 4 HFA is an SBS elastomeric modified bituminous geomembrane with Ring and Ball melting point of 115°C (EN 1427)

**USE**

Extreme level of mechanical resistance, for use as environmental protection and underground works waterproofing (aggressive materials, reinforced precautions), in particular :  
- Railways, directly under ballast,  
- Dams,  
The membrane has the same friction angle on both sides.  
Product use must be validated by Axter.

**APPLICATION METHOD**

By torch welding or other similar technique.

**STORAGE**

Rolls must not be stored directly on the ground. Provide suitable supports (blocks, slides, wooden planks) with a minimum height of 35 cm to be placed under the ends of the mandrel.

**COMPOSITION**

(indicative)

Reinforcement (g/m <sup>2</sup> ) :	Glass mat	50
Reinforcement (g/m <sup>2</sup> ) :	Non-woven geotextile	400
Binder (g/m <sup>2</sup> ) :	Elastomeric SBS	5400
Surface finish (g/m <sup>2</sup> ) :	Sand	250
Under surface finish (g/m <sup>2</sup> ) :	Peel-off silicone film	40

CHARACTERISTICS		STANDARD	UNITS	AVERAGE	Min
Dimensions	Length	EN 1848-1	m	55	54
	Width		m	5.10	5.01
Thickness (on finished product)		EN 1849-1	mm	5.60	4.80
Surface mass		EN 1849-1	kg/m <sup>2</sup>	6.40	5.90
Tensile properties : maximum tensile strength	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	-16
Static Puncture	Resistance	EN ISO 12236	kN	4	3.5
	Move		mm	50	40
Water permeability (liquid tightness)		EN 14150	m <sup>3</sup> /m <sup>2</sup> .j	1.10 <sup>-7</sup>	<
Gas permeability (gas tightness)		ASTM D 1434-82	m <sup>3</sup> /(m <sup>2</sup> .j.atm)	2.10 <sup>-4</sup>	<
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	
<b>Durability</b>					
Oxidation	Tensile strength according to EN 12311-1	EN 14575	%	100	75
				Maximum tensile strength	100
Weathering	retained tensile strength according to EN 12226	EN 12224	%	100	75
				Maximum tensile strength	100
				100	75

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

