

TECHNICAL SHEET

IZOELAST P4 FLL plus

Waterproofing membrane with a polyester reinforcement and with elastomere modified bitumen resistant to the penetration of roots

Product description IZOELAST P4 FLL plus is a waterproofing membrane made from a polyester reinforcement, on both sides coated with elastomere modified bitumen, to which additions are added that prevent the penetration of roots (membrane is not resistant to penetration of aggressive roots and other parts of the roots, such as Bamboo, which could be physically damaged to membrane). The membrane is protected on both sides by polymeric sheeting.

Characteristics of the product IZOELAST P4 FLL plus meets the demands of the standards EN 13707, 13969 type A and type T. Because of its excellent flexibility at low temperatures, it shows excellent characteristics at installation and deformations, and excellently bridges cracks also at very low temperatures. The mechanical characteristics of the reinforcement give the product high resistance against penetration and tearing to the product and the additions prevent penetration of roots.

Characteristic	EN Method	Unit	Value
Reinforcement	Polyester fleece		
Surface protection	Polymeric sheeting / Polymeric sheeting		
Length	1848-1	m	≥ 10
Width	1848-1	m	≥ 1
Straightness	1848-1	20 mm/10m	pass
Thickness	1849-1	mm	≥ 3,6
Watertightness	1928	kPa	≥ 100
Durability of water tightness against artificial ageing (12 weeks at 70 ° C)	1296/1928	kPa	≥ 100
Flexibility at low temperature	1109	°C	≤ -15
Flow resistance at elevated temperature	1110	°C	≥ 100
Resistance to tearing <ul style="list-style-type: none"> longitudinal transversal 	12310-1	N	≥ 200 ≥ 200
Shear resistance of joints <ul style="list-style-type: none"> longitudinal transversal 	12317-1	N/50 mm	≥ 600 ≥ 550
Dimensional stability <ul style="list-style-type: none"> longitudinal transversal 	1107-1	%	≤ 0,3 ≤ 0,3
Water vapor properties "μ"	1931	/	* NPD
Chemical resistance	1847/13707 Annex C	-	pass
Reaction to fire	13501-1	Class	E
External fire performance	13501-5	Class	F _{ROOF}
Resistance to static loading	12730/A	kg	≥ 15
Resistance to static loading	12730/B	kg	≥ 15
Resistance to impact	12691/A	mm	≥ 1000
Resistance to impact	12691/B	mm	≥ 1500
Tensile properties <ul style="list-style-type: none"> longitudinal transversal 	12311-1	N/50mm	≥ 650 ≥ 550
Elongation <ul style="list-style-type: none"> longitudinal transversal 	12311-1	%/50mm	≥ 35,0 ≥ 35,0
Resistance to root penetration	13948	-	pass
Flexibility at low temperature after artificial ageing by long term exposure to elevated temperature (12 weeks at 70 ° C)	1296/1109	°C	* NPD
Flow resistance at elevated temperature after artificial ageing by long term exposure to elevated temperature (12 weeks at 70 ° C)	1296/1110	°C	* NPD
Content of dangerous substances	Annex ZA	/	no

* NPD – no performance determined

Use and installation

IZOELAST P4 FLL plus is used as a top layer in green flat roof systems or as a layer in very demanding waterproofing of underground parts of objects that are exposed to water pressure and where resistance against root penetration is needed. It is installed with welding process with a flame (gas) burner, over the entire surface. The joints are carried out with 10 cm overlaps and must be watertight.

Storage

The rolls must be stored in an upright position, protected against dampness and extreme temperatures. In winter it is recommended to store the rolls before installation for 24 hours at a temperature of over + 5°C.

Disposal considerations of waste

For the removal of waste of product, it is necessary to follow the valid local environmental regulations. Waste classification: 17 03 02 bituminous mixtures other than those mentioned in 17 03 01.



The product is in conformity with **EN 13707:2004+A2:2009, EN 13969:2004 and EN 13969:2004/A1:2006 Type A and Type T.**

The system of quality and handling of the environment is conforming with EN ISO 9001 and EN ISO 14001.