

## APP MODIFIED, BITUMINOUS WATERPROOFING MEMBRANE

-5°C Series

### P 4000 AL

APP (Atactic Polypropylene) Modified, Bituminous Waterproofing Membrane

It's upper surface is coated with Aluminum, sub surface is coated with PE.

It is reinforcement with Polyester.

Test Name	Standard	Unit	Tolerance	Value
Visual Defects	TS EN 1850-1	-	-	none
Thickness	TS EN 1849-1	mm	±0,2	4
Reinforcement	-	g/m <sup>2</sup>	-	180
Length	TS EN 1848-1	m	min (-0,03)	10
Width	TS EN 1848-1	cm	min (-2)	100
Straightness	TS EN 1848-1			pass
Watertightness	TS EN 1928 Mt.A/Mt.B*	10kPa/60kPa*		pass
Dimensional Stability	TS EN 1107-1	%	max	≤0,6
Flexibility at Low Temperature	TS EN 1109 / ASTM D-5147	°C	≤	-5
Flow Resistance at Elevated Temp.	TS EN 1110 / ASTM D-5147	°C	≥	110
Tensile Strength (MD/CMD)	TS EN 12311-1	N/50 mm	min	600/400
Elongation (MD/CD)	TS EN 12311-1	%	min	30/30
Impact Resistance	TS EN 12691 Mtd.A	mm	min	2000
Resistance to Static Loading	TS EN 12730 Mtd.A/Mtd.B*	kg	min	15
Shear Resistance of Joints	TS EN 12317-1	N/50 mm	±20%	630
Peel Resistance of Joints	TS EN 12316-1	N/50 mm	±30%	NPD
Tearing Resistance (with nail)	TS EN 12310-1	N/50 mm	±20%	NPD
Reaction to Fire	TS EN 11925-2	class		E
External Fire Performance	ENV 1187-2	class		Broof
Form stability under cyclical temp. changes	TS EN 1108			1,25
Water Vapor Properties	TS EN 1931		min	20000
Watertightness After Stretching	TS EN 13897			NPD
Resistance to Root Penetration	EN 13948			NPD
Artificial Ageing +Cold Flexibility	TS EN 1296 / TS EN 1109	°C	0+10	10
Artificial Ageing +Flow Resistance	TS EN 1296 / TS EN 1110	°C	0+10	0
Artificial Ageing +Watertightness	TS EN 1296 / TS EN 1928	2 kPa/60kPa*		NPD
Adhesion on Granules	TS EN 12039	%	max	NPD
Resistance of Chemicals	TS EN 1847			NPD
Dangerous Substances	-	one/none		none