



COLD FLEXIBILITY  
**-10 °C**

# PLANA P PLANA P mineral

**PLANA P and PLANA P MINERAL are plastomeric waterproofing membranes with excellent performance indicated for the waterproofing of all structures.**

	<p><b>Guaranteed Quality</b>          UNI EN ISO 9001:2008 and          UNI EN ISO 14001:2004</p>		<p><b>All year membranes</b></p>
	<p><b>Product in compliance with European Standards</b></p>		<p><b>Lateral and endlap sealing strips</b></p>
	<p><b>Polyglass is a member of Green Building Council</b></p>		<p><b>Easily flamed non-stick polyethylene film</b></p>
	<p><b>Bituminous membrane polymeric matrix ageing control</b></p>		



*Adds value!*



# PLANA P PLANA P mineral



## TECHNICAL DESCRIPTION

**PLANA P** and **PLANA P MINERAL** are plastomeric waterproofing membranes with outstanding performance, made of a latest generation distilled bitumen-based compound modified with POLYPROPYLENE and staple non-woven polyester fabric reinforcement. The general characteristics of these membranes guarantee good versatility and adaptability to various types of use. The special type of compound ensures remarkable characteristics of low temperature flexibility. The sophisticated technology with which these membranes is made guarantees the product's quality, stability, and durability.

## DESTINATION

PRODUCT	SINGLE LAYER		MULTI-LAYER				ROOT BARRIER	VAPOUR BARRIER	FOUNDATIONS		UNDER ROOFING TILE
	E.	U.H.P.	F.L.		U.L.				R.D.	P.	
			E.	U.H.P.	E.	U.H.P.					
3 mm					•	•					
4 mm			•	•	•	•			•		
4 kg Mineral			•								
4,5 kg Mineral			•								

F.L.: Finishing Layer - U.L.: Underlying Layer - R.D.: Rising Damp - P.: Pitch - E.: Exposed - U.H.P.: Under Heavy Protection

**PLANA P** and **PLANA P MINERAL** membranes are suited for the waterproofing of traditional, metal, prefabricated civil and industrial of all structures. Waterproofing systems **under heavy protection** can be laid in single layers (whenever permitted by product) or multiple layers with minimum thicknesses of 7 mm (4+3 mm).

## APPLICATION: INSTRUCTIONS AND RECOMMENDATIONS

**PLANA P** can be provided with its upperside covered with a talc, sand, or a non woven polypropylene fabric. Its underside is protected and faced with **POLYFLAM EasyTorch** (reduced printed area increases product adhesion), the special non-stick polyethylene film to be flamed during laying. In the MINERAL version, the upperside is protected by an even layer of colored or natural mineral slate chips and features **BYSTOP** (patented) lateral and endlap sealing strip for easy overlapping. Support surfaces must be dry, clean, and sufficiently smooth and level. Application is made by light flaming with propane gas. Laying is quick and easy. We recommend slightly heating the roll of membrane prior to laying in winter.



Talc



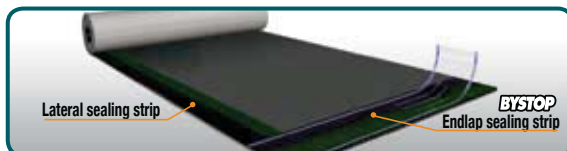
Sand



A non woven polypropylene fabric



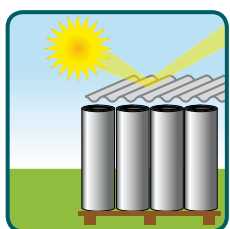
POLYFLAM *EasyTorch*



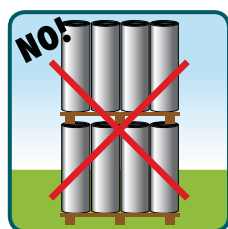
BYSTOP (endlap)

## STOCKING

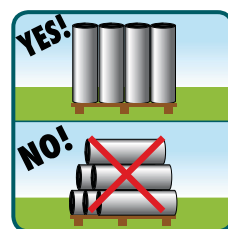
Keep the products packed in the carton box in a dry place, away from direct sunlight. Do not place the pallets, one on top of another and the rolls must always be stocked in a vertical position. The contact with solvents and organic liquids may damage the product. Avoid application if the temperature is excessively low or high, avoid stamping (shoes with crampons, small objects or sharp edges). For further information contact Polyglass SpA Technical Office.



Keep out of direct sunlight



Avoid stocking pallets without evenly distributing the load



Keep the rolls standing



Absolutely avoid puncturing the product

## TECHNICAL SPECIFICATIONS

TEST METHOD	TECHNICAL CHARACTERISTICS	UNIT OF MEASURE	NOMINAL VALUES	NOMINAL VALUES
EN 1848-1	LENGTH	m	10 (-1%)	10 (-1%)
EN 1848-1	WIDTH	m	1 (-1%)	1 (-1%)
EN 1848-1	STRAIGHTNESS	mm/10 m	Exceeds	Exceeds
EN 1849-1	THICKNESS	mm	4 (-0,2)	NPD
EN 1849-1	MASS PER UNIT AREA	kg/m <sup>2</sup>	NPD	4 (±10%)
EN 1928-B	WATERTIGHTNESS	kPa	Exceeds	Exceeds
EN 1928-B	WATERTIGHTNESS AGAINST ARTIFICIAL AGEING	kPa	Exceeds	-
EN 1928-B	WATERTIGHTNESS AGAINST CHEMICAL	kPa	Exceeds	-
EN 1847				
EN 13897	WATERTIGHTNESS AFTER STRETCHING	%	-	-
EN 13501-5	EXTERNAL FIRE PERFORMANCE	-	F <sub>Roof</sub>	F <sub>Roof</sub>
EN 13501-1	REACTION TO FIRE	Euroclass	F	F
EN 12316	PEEL RESISTANCE	N/50 mm	-	-
EN 12317	SHEAR RESISTANCE	N/50 mm	-	-
	TENSILE PROPERTIES			
	MAXIMUM LOAD AT BREAK			
EN 12311-1	Longitudinal	N/50 mm	700 (-20%)	700 (-20%)
	Transversal	N/50 mm	500 (-20%)	500 (-20%)
	ELONGATION AT BREAK			
EN 12311-1	Longitudinal	%	40 (-15)	40 (-15)
	Transversal	%	40 (-15)	40 (-15)
EN 12691-A	RESISTANCE TO IMPACT	mm	≥900	≥900
EN 12730-A	RESISTANCE TO STATIC LOADING	kg	≥15	≥15
	RESISTANCE TO TEARING			
EN 12310-1	Longitudinal	N	150 (-30%)	150 (-30%)
	Transversal	N	150 (-30%)	150 (-30%)
EN 1107-1	DIMENSIONAL STABILITY	%	≤0,3	≤0,3
EN 1108	FORM STABILITY UNDER CYCLIC TEMPERATURE CHANGE	%	-	-
EN 1109	COLD FLEXIBILITY	°C	≤-10	≤-10
EN 1110	FLOW RESISTANCE AT ELEVATED TEMPERATURE	°C	≥110	≥110
EN 1110	ARTIFICIAL AGEING BEHAVIOUR (FLOW RESISTANCE)	°C	≥100	≥100
EN 1296				
EN 1297	ARTIFICIAL AGEING BEHAVIOUR (VISIBLE DEFECTS)	-	Exceeds	-
EN 12039	ADHESION OF GRANULES	%	-	≤30
EN 1931	WATER VAPOUR PROPERTIES	μ	20000	20000
EN 1850-1	VISIBLE DEFECTS	-	ABSENT	ABSENT

Thickness and weight parameters are indicative only for Italian market.  
In compliance with EN 13707 products standards (layers for roofing) and EN 13969 TYPE T products standards (layers for foundations).

## DIMENSIONS – PACKAGING

PRODUCT	THICKNESS mm	WEIGHT kg/m <sup>2</sup>	DIMENSIONS m
PLANA P	3	-	1x10
PLANA P	4	-	1x10
PLANA P MINERAL (Grey)	-	4	1x10
PLANA P MINERAL (Other colours)	-	4	1x10
PLANA P MINERAL (Grey)	-	4,5	1x10
PLANA P MINERAL (Other colours)	-	4,5	1x10

## AVAILABLE COLOURS

Upperside protected with coloured mineral slate chips:



Grey



Green



Red



White



Brown

POLYGLASS SPA reserves the right to make any and all modifications required for the ongoing perfection of the product without notice.



FLAT ROOF WITH PEDESTRIAN ACCESS



FLAT ROOF WITH LIMITED ACCESS



PROFILED METAL DECKS



INDUSTRIAL SAWTOOTH ROOFS



CURVED ROOFS



PITCHED ROOFS



FOUNDATIONS



UNDERGROUND CAR PARK



RAISED CAR PARK



ROOF GARDENS



BRIDGES AND VIADUCTS



RESERVOIRS AND CANALS



GALLERY AND TUNNEL



RENEWAL WATERPROOFING CONVERING ONLY RELINING WITH INSULATING MATERIAL SPECIAL RE-ROOFING WORK



DETAILS

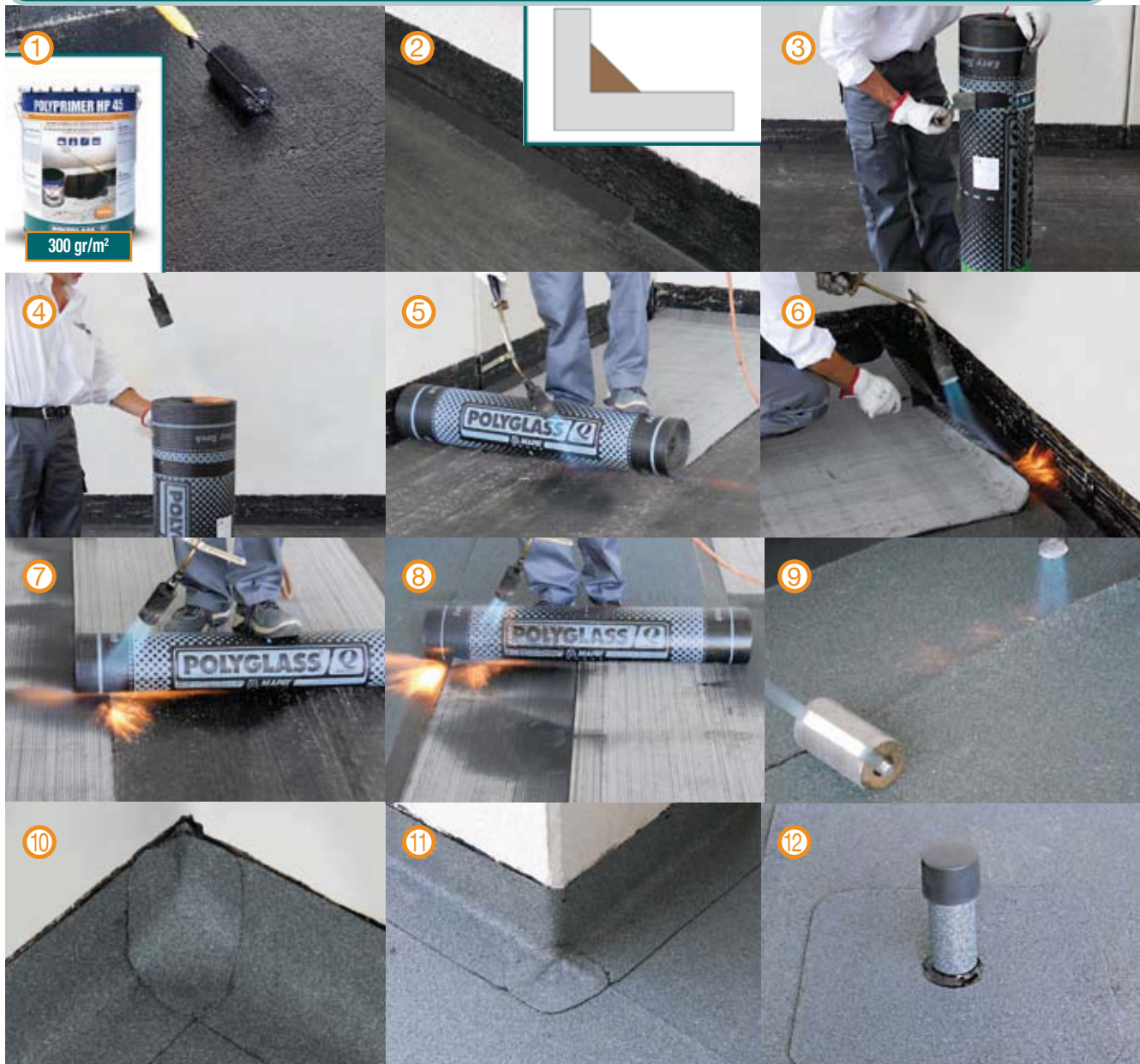


SPECIAL ROOFS



# WATERPROOFING MEMBRANES

## APPLICATION METHOD



- ① Treat the area to be waterproofed with bituminous primer (POLYPRIMER HP 45 Professional).
- ② Position the "Bordangolo" near the horizontal-vertical joint.
- ③ Completely strip away the product identification tape.
- ④ In the colder months, we recommend heating up the roll of membrane before applying it.
- ⑤ Position and apply the sheet by flaming its bottom surface.
- ⑥ Pull the sheet up to a certain height against vertical surfaces.
- ⑦ Apply the second sheet with adequate overlapping.
- ⑧ Lay the second layer by overlapping. Do not cross the sheets.
- ⑨ Roll the overlapping areas using the special pressing roller.
- ⑩ Example of internal corner.
- ⑪ Example of external corner.
- ⑫ Example of vent pipe.

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*Adds value!*

**POLYGLASS SPA**

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