

# Polyflex HP P

Elastomeric-plastomeric polymer distilled bitumen waterproofing membrane

BRIDGES AND VIADUCTS



**POLYFLEX HP P** is a prefabricated ELASTOMERIC-PLASTOMERIC (Plastomer-Polymer Bitumen) waterproofing membrane capable of excellent performance. Made from a special distilled bitumen compound modified with a high percentage of special polymers such as POLYPROPYLENE (APP) and POLYOLEFIN (APAO), with the addition of special anti-ageing additives that provide blends with superior performance characteristics.

**POLYFLEX HP P** is a membrane produced to the standards set by NAT® technology, the innovative production system for the control of polymer matrix ageing in bitumen membranes.

**POLYFLEX HP P** has a spunbond polyester nonwoven carrier stabilized with glass strands parallel to the machine direction. The carrier gives great tensile strength (in all directions) and puncture resistance, with excellent dimensional stability.

Flexibility at  
low temperature  
**-20 °C**

CE PRODUCT COMPLIANT WITH EUROPEAN STANDARD 1370

BRIDGES AND VIADUCTS CERTIFICATION

## INTENDED USE

PRODUCT	EN 13707 ROOFS						EN 13969 FOUNDATIONS			EN 13859-1 UNDERLAY FOR DISCONTINUOUS ROOFING	EN 13970 VAPOUR BARRIER	EN 14695 BRIDGES AND VIADUCTS
	SINGLE-PLY		MULTI-PLY				ROOT BARRIER	RISING DAMP	GROUNDWATER			
	EXPOSED	BALLASTED	EXPOSED		BALLASTED							
			BASE LAYER	CAP SHEET	BASE LAYER	CAP SHEET						
POLYFLEX HP P 4 mm S F			•	•	•	•		•	•			•
POLYFLEX HP P 4 mm PP F			•	•	•	•		•	•			•
POLYFLEX HP P 5 mm S F			•	•	•	•		•	•			•

**POLYFLEX HP P** can be applied as part of a MULTI-PLY ROOF, in EXPOSED or BALLASTED waterproofing systems.

In a MULTI-PLY built-up roofing system, the membrane can be applied as a BASE LAYER or CAP SHEET.

In the smooth version (as indicated on the chart), **POLYFLEX HP P** is suitable for application as part of a MULTI-PLY system on FOUNDATION beds below the groundwater line, or as part of a SINGLE or MULTI-PLY system on FOUNDATION walls to deal with RISING DAMP or percolating water, or as an under-floor MOISTURE BARRIER.

**POLYFLEX HP P** can be applied on BRIDGES AND VIADUCTS as part of a SINGLE or MULTI-PLY system, or on the ROOFS of residential/commercial and industrial buildings required to carry VEHICLE TRAFFIC as part of a MULTI-PLY system only, where the binder course is applied directly on top of the waterproofing membranes.

## FINISHES

The **POLYFLEX HP P** membrane comes in a standard version with the upper side protected with sand or with texturized PP fabric.

The underside comes with a standard protective finish consisting in a heat-fusible polyethylene film.

For further information on other available finishes, please contact the Polyglass SpA Sales Department.

### Top finishes

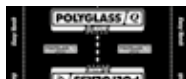


Sand (S)



Texturized PP fabric (PP)

### Bottom finishes



Heat-fusible polyethylene film (F)

REV. 2-23

## TECHNICAL CHARACTERISTICS

STANDARD	TECHNICAL CHARACTERISTICS	UNIT OF MEASURE	NOMINAL VALUES		
			POLYFLEX HP P		
EN 1848-1	WIDTH	m	≥ 1		
EN 1848-1	LENGTH	m	10 (±1%)	10 (±1%)	8 (±1%)
EN 1849-1	THICKNESS	mm	4 (±0,2)	4 (±0,2) PP fabric version	5 (±0,2)
EN 1849-1	AREA MASS	kg/m <sup>2</sup>	NPD		
EN 1848-1	STRAIGHTNESS	mm/10 m	Meets the requirements		
EN 1928-B	WATERTIGHTNESS	kPa	Meets the requirements		
EN 1931	WATER VAPOUR RESISTANCE FACTOR μ	-	20000 (±20%)		
EN 13897	WATERTIGHTNESS AFTER STRETCHING AT LOW TEMPERATURE	kPa	NPD		
EN 14223	WATER ABSORPTION	%	≤ 0,5		
EN 13501-1	REACTION TO FIRE	Class	NPD		
EN 13501-5	EXTERNAL FIRE PERFORMANCE	Class	NPD		
EN 12039	ADHESION OF GRANULES	%	NPD		
EN 1850-1	VISIBLE DEFECTS	-	None		
EN 1107-1	DIMENSIONAL STABILITY	%	≤ 0,3		
EN 12316-1	PEEL RESISTANCE	N/50 mm	≥ 50		
EN 12317-1	SHEAR RESISTANCE Longitudinal Transversal	N/50 mm N/50 mm	800 (±20%) 800 (±20%)		
EN 12691-A	RESISTANCE TO IMPACT (RIGID SUPPORT)	mm	≥ 1750		
EN 12691-B	RESISTANCE TO IMPACT (SOFT SUPPORT)	mm	≥ 2000		
EN 12730-A	RESISTANCE TO STATIC LOADING (SOFT SUPPORT)	kg	≥ 25		
EN 12730-B	RESISTANCE TO STATIC LOADING (RIGID SUPPORT)	kg	≥ 35		
EN 12310-1	RESISTANCE TO TEARING Longitudinal Transversal	N N	250 (±30%) 250 (±30%)		
EN 12311-1	TENSILE STRENGTH Longitudinal Transversal ELONGATION AT BREAK Longitudinal Transversal	N/50 mm N/50 mm % %	1200 (±20%) 1000 (±20%) 50 (±15) 50 (±15)		
ASTM D 1000	PEELING	N/10 mm	NPD		
EN 14695 ANNEX B	DIMENSIONAL STABILITY (160 °C)	%	≤ 1		
EN 13596	BOND STRENGTH	N/mm <sup>2</sup>	≥ 0,8		
EN 13653-3	RESISTANCE TO SHEAR	N/mm <sup>2</sup>	≥ 0,20		
EN 14224-1	DETERMINATION OF THE RESISTANCE CAPACITY TO FESSURE	°C	≤ -15		
EN 14224-2	DETERMINATION OF THE RESISTANCE CAPACITY TO FESSURE	°C	NPD		
EN 14691	COMPATIBILITY BY HEAT CONDITIONING	%	≥ 100		
EN 14692	RESISTANCE TO COMPACTION OF AN ASPHALT LAYER	-	Meets the requirements		
EN 14693-3	BEHAVIOUR OF BITUMEN SHEETS DURING APPLICATION OF MASTIC ASPHALT S Δt i	% mm n°	NPD NPD NPD		
EN 14694	WATERTIGHTNESS (DYNAMIC PRESSURE - 500 kPa - 1000 CYCLES)	-	Meets the requirements		
EN 1109	COLD FLEXIBILITY	°C	≤ -20		
EN 1110	FLOW RESISTANCE AT ELEVATED TEMPERATURE	°C	≥ 140		
<b>DURABILITY AFTER AGEING</b>					
EN 1928-B - EN 1296	WATERTIGHTNES AGAINST ARTIFICIAL AGEING	kPa	Meets the requirements		
EN 1928-B - EN 1847	WATERTIGHTNESS AGAINST CHEMICAL	kPa	Meets the requirements		
EN 1850-1 - EN 1297	ARTIFICIAL AGEING BY LONG TERM EXPOSURE TO THE COMBINATION OF UV RADIATION, ELEVATED TEMPERATURE AND WATER	-	Meets the requirements		
EN 1109 - EN 1296	ARTIFICIAL AGEING BEHAVIOUR (COLD FLEXIBILITY)	°C	≤ -10		
EN 1110 - EN 1296	ARTIFICIAL AGEING BEHAVIOUR (FLOW RESISTANCE)	°C	≥ 130		
EN 14223 - EN 1296	WATER ABSORPTION AFTER AGEING AT HIGH TEMPERATURE	-	NPD		
<b>ADDITIONAL DATA</b>					
EN 13583:2012	DETERMINATION OF HAIL RESISTANCE	m/s	NPD		
-	DETERMINATION OF HAIL RESISTANCE - VKP APIB N° 09	Class	NPD		
SP METHOD 3873	PERMEABILITY TO RADON GAS	-	NPD		
SP METHOD 3873	TRANSMITTANCE TO RADON GAS	-	NPD		
BR 2012	TRANSMITTANCE TO METHANE GAS	-	NPD		
IEC 62631-3-1:2016	VOLUMETRIC RESISTIVITY	Ωcm	NPD		
EN 13948	RESISTANCE TO ROOT PENETRATION	-	NPD		
-	IGLAE CLASS	Class	S		
-	THERMAL CONDUCTIVITY	W/mK	0,20		
-	THERMAL CAPACITY	kJ/K	1,20		

Given the variety of situations in which the product can be used, the diversity of substrates and its multiple possible uses within COMPLEX WATERPROOFING BUILT-UP SYSTEMS, Polyglass SpA cannot be held responsible for the results achieved in terms of either function or looks. Rev. 2-23

# Polyflex HP P

## PACKAGING

PRODUCT	THICKNESS mm	WEIGHT kg/m <sup>2</sup>	DIMENSIONS m
POLYFLEX HP P S F	4	-	1x10
POLYFLEX HP P PP F	4	-	1x10
POLYFLEX HP P S F	5	-	1x8

## STORAGE

The product comes in rolls and is packed upright on shrink-wrapped pallets.

Use always a weight distributing element if you are forced to stack the pallets one on top of each other. A solid distributing element will avoid damages to the rolls underneath. Contact with solvents or organic liquids can damage the product.

Keep the product in a dry place, out of direct sunlight, protected from heat sources and freezing temperatures.

## INSTALLATION TIPS

The surface of any substrate due to be covered with **POLYFLEX HP P** must be flat, dry, clean, and free of all foreign matter or loose material.

When laying over old waterproofing build-ups (refurbishment work), the old system and its individual layers must be checked to ensure they are still properly adhered to the substrate.

Excessive moisture levels on the surfaces to be waterproofed can result in membranes coming off.

If applied on top of insulating layers, said insulation must always be applied on top of a suitable vapour barrier; the individual insulation board must be glued on or fixed mechanically to the substrate.

Before applying the membranes, coat the substrate with an adhesion-promoting primer: either solvent-based products such as POLYPRIMER and POLYPRIMER HP or water-based product such as IDROPRIMER.

Fully-adhered application is generally the norm and involves lightly torching with a propane gas torch, following the instructions given on the intended use chart. During the membrane's installation, be careful not to puncture the surface in any way that is likely to damage the membrane's surface (footwear with spikes or studs, leaving anything pointed or with a small surface area sitting on top, sharp objects, etc.).

When applied as an exposed layer, the membrane with the smooth surface finish must be protected - at least 3 months after application and, whatever the case, waiting until it has had time to oxidize - with protective and/or reflective paints from the SPECIAL PRODUCTS line.

For further details on application, please contact the Polyglass SpA Technical Support Department.

## SAFETY RULES

The polymer bitumen membranes, manufactured by Polyglass SpA, are made from bitumen distilled from crude oil and do not contain tar (derived from coal), asbestos or chlorine.

## LEGAL RULES

The values given are approximate average data relating to the current product range and may be edited or updated by Polyglass SpA at any time without any prior notice. As Customer or User, it is your responsibility to check that the technical data sheet you have is valid for the batch of product in your hands and, whatever the case, that you have the latest version issued.

Always refer to the latest up-to-date version of the Technical Data Sheet and relevant Declaration of Performance, both of which you can find on our site [www.polyglass.com](http://www.polyglass.com). As the End User, it is your responsibility to check that the product is fit for its intended purpose.

PRODUCT FOR PROFESSIONAL USE.

