



COLD FLEXIBILITY

**-20 °C**

## POLYSHIELD POLYSHIELD mineral

**POLYSHIELD and POLYSHIELD MINERAL are plastomeric waterproofing membranes with outstanding performance indicated for surfaces subject to extreme stress.**



**Guaranteed Quality**  
UNI EN ISO 9001:2008 and  
UNI EN ISO 14001:2004



**All year membranes**



**Product in compliance**  
with European Standards



**Lateral and endlap**  
sealing strips



**Easily flamed non-stick**  
polyethylene film



**Polyglass is a member of**  
Green Building Council



**Agrément Certificate**  
10/4729



**Bituminous membrane**  
polymeric matrix  
ageing control



**Manufacturers of**  
Bitumen Distillate  
Polymer Membranes

ROOFING AND WATERPROOFING SYSTEMS

**POLYGLASS®/Q**



*Adds value!*



## TECHNICAL DESCRIPTION

**POLYSHIELD** and **POLYSHIELD MINERAL** are plastomeric waterproofing membranes with outstanding performance, made of a latest generation distilled bitumen-based compound modified with POLYPROPYLENE and continuous thread non-woven polyester fabric with elevated basic weight reinforced and stabilized by longitudinal glass fibre. The special type of compound and the elevated mechanical characteristics of the fabric (excellent elongation, remarkable tensile strength) suit these membranes to the heaviest use. The compound's special formula grants unique flexibility also at low temperatures (cold flexibility -20 °C).

## DESTINATION

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

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

**POLYSHIELD** and **POLYSHIELD MINERAL** are particularly indicated for use on the surfaces subjected to the heaviest stress because their plasticity ensures perfect support surface adhesion. Their excellent mechanical and dimensional stability characteristics indicate use in civil and industrial waterproofing with all structures (traditional, metal, prefabricated) in which these qualities are required. 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

**POLYSHIELD** 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.



Talc



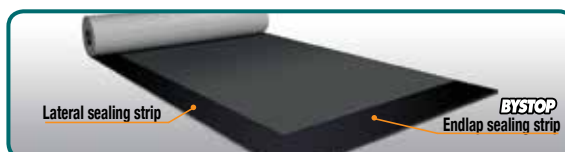
Sand



A non woven polypropylene fabric



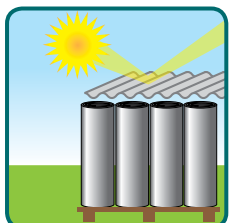
**POLYFLAM EasyTorch**



**BYSTOP** (endlap)

## STOCKING

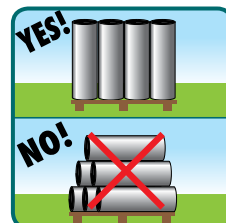
Keep the products packed in a dry place, away from direct sunlight. Do not place the pallets, one on top of another and the rolls must always be stocked in a vertical position. The contact with solvents and organic liquids may damage the product. Avoid application if the temperature is excessively low 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 CHARACTERISTIC	UNIT OF MEASURE	NOMINAL VALUES	NOMINAL VALUES
EN 1848-1	LENGTH	m	≥8	≥8
EN 1848-1	WIDTH	m	≥1	≥1
EN 1848-1	STRAIGHTNESS	mm/10 m	Pass	Pass
EN 1849-1	THICKNESS	mm	4 (-0,2)	5 (-0,2)
EN 1849-1	MASS PER UNIT AREA	kg/m <sup>2</sup>	4,2	5,2
EN 1928-B	WATERTIGHTNESS	kPa	Supera	Supera
EN 13897	WATERTIGHTNESS AFTER STRETCHING	%	NPD	NPD
BS 476-3:1958	EXTERNAL FIRE PERFORMANCE	-	Broof(t4)	Broof(t4)
EN 13501-1	REACTION TO FIRE	Euroclass	F	F
EN 12316	PEEL RESISTANCE OF JOINT	N/50 mm	NPD	NPD
EN 12317	SHEAR RESISTANCE OF JOINT	N/50 mm	700/700 (±20%)	700/700 (±20%)
EN 12311-1	TENSILE PROPERTIES			
	MAXIMUM LOAD AT BREAK			
	Longitudinal	N/50 mm	900 (±20%)	900 (±20%)
	Transversal	N/50 mm	750 (±20%)	750 (±20%)
	ELONGATION AT BREAK			
	Longitudinal	%	45 (±15)	45 (±15)
	Transversal	%	50 (±15)	50 (±15)
EN 12691-A	RESISTANCE TO IMPACT	mm	≥1500	≥1500
EN 12730-A	RESISTANCE TO STATIC LOADING	kg	≥25	≥25
EN 12310-1	RESISTANCE TO TEARING			
	Longitudinal	N	200 (±30%)	200 (±30%)
	Transversal	N	200 (±30%)	200 (±30%)
EN 1107-1	DIMENSIONAL STABILITY	%	≤0,3	≤0,3
EN 1108	FORM STABILITY UNDER CYCLIC TEMPERATURE CHANGE	%	-	-
EN 1109	COLD FLEXIBILITY	°C	≤-20	≤-20
EN 1110	FLOW RESISTANCE AT ELEVATED TEMPERATURE	°C	≥140	≥140
EN 1110	ARTIFICIAL AGEING BEHAVIOUR (FLOW RESISTANCE)	°C	≥140	≥140
EN 1296	ARTIFICIAL AGEING BEHAVIOUR (VISIBLE DEFECTS)	-	Pass	-
EN 12039	ADHESION OF GRANULES	%	≤30	≤30
EN 1931	WATER VAPOUR PROPERTIES μ	-	20000	20000
EN 1850-1	VISIBLE DEFECTS	-	Absent	Assenti

In compliance with EN 13707 product standards (layers for roofing).  
BBA Agrément Certificate 10/4729.

## DIMENSIONS - PACKAGING

PRODUCT	THICKNESS mm	WEIGHT kg/m <sup>2</sup>	DIMENSIONS m
POLYSHIELD (Talc version)	4	-	1x8
POLYSHIELD MINERAL (G)	5	-	1x8
POLYSHIELD MINERAL (G)	-	5,2	1x8

## AVAILABLE COLOURS

Upperside protected with colored mineral slate chips:



Grey



Green



Red



White



Brown

Considering the various situations of use, the numerous types of support surfaces and the possibilities for use inside COMPLEX WATERPROOF LAYERING. Polyglass SpA cannot assume any liability for damages derived from the product's results in terms of function or aesthetics. Rev. 2-18



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 CONVERGING ONLY  
RELINING WITH INSULATING MATERIAL  
SPECIAL RE-ROOFING WORK



DETAILS



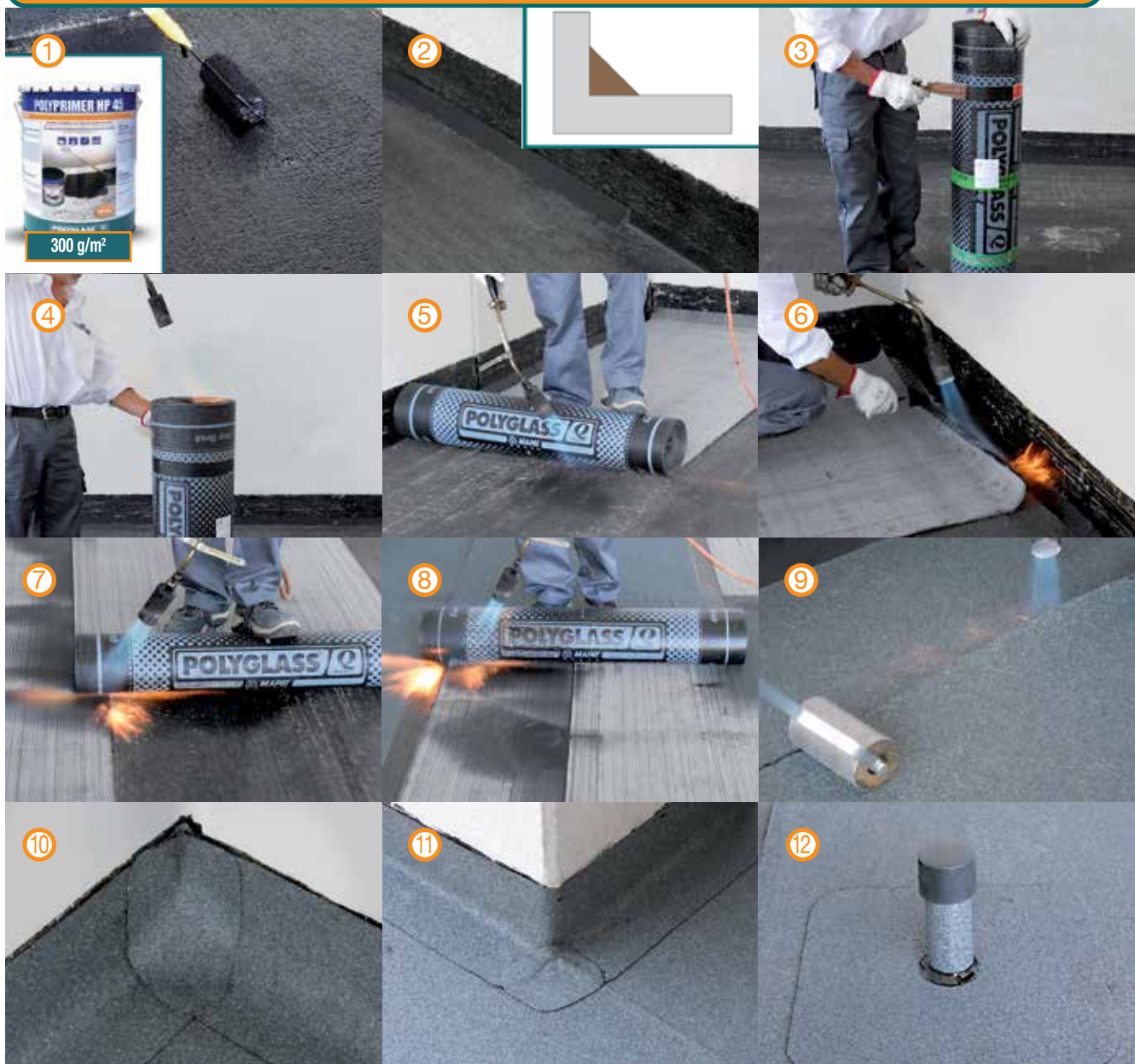
SPECIAL ROOFS

Rev. 2-18



# 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.

Rev. 2-18

The content of this Technical Sheet can be reproduced onto another project document, but the resulting document will never replace or integrate the Technical Sheet valid at the time of application of the Polyglass product.

The most recent Technical Sheet is available from our website [www.polyglass.com](http://www.polyglass.com).

ANY CHANGE IN THE TEXT OR CONDITIONS IN THIS TECHNICAL SHEET OR DERIVING FROM IT CANCELS POLYGLASS' LIABILITY.



*Adds value!*

**POLYGLASS SPA**

Registered Office: Viale Jenner, 4 - 20159 MILANO - Italy

Head Office: Via dell'Artigianato, 34 - 31047 Ponte di Piave (TV) - Italy

Tel. +39 04227547 - Fax +39 0422854118 - [www.polyglass.com](http://www.polyglass.com) - [info@polyglass.it](mailto:info@polyglass.it)