

# FLAGON PZ/SL



## TWO-COLORED PVC-P PROTECTIVE MEMBRANE FOR UNDERGROUND WORKS

### USE

FLAGON PZ/SL is a two-colored PVC- P membrane dedicated as a protective layer in civil engineering and building structures, such as:

- Tunnels and dug and buried galleries
- Cut and cover tunnels
- Coverings of buried structures
- Underground car parks
- Sealed encasings of civil engineering structures and buildings

Flagon PZ/SL protective membrane includes a thin colored layer on the visible side, referred to as the "signal layer". This allows any damage during installation to be visually identified immediately.

FLAGON PZ/SL membrane can be used as protection of a single-layer waterproofing system, compartmentalized or not, and in Flag Vacuum system.

FLAGON PZ/SL protective membrane, combined with FLAGON BT 20 waterproofing membrane, meets the recommendations of CETU French Avis Technique.

The constituents used to manufacture this membrane are partly made from recycled materials.



### APPLICATION

FLAGON PZ/SL is installed above the waterproofing membrane to protect it from mechanical damages.

The sheets are welded together by applying hot air or using hot wedge, with manual or automatic welder. The welding can be made either with a track that with double track.

FLAGON PZ/SL is compatible with all the accessories and membranes in the FLAGON PVC range.

### DESCRIPTION

FLAGON PZ/SL membrane is a non-reinforced synthetic membrane made by co-extrusion from PVC-P. It is highly resistant to attack by micro-organisms and perforation by roots. It has a different color on each side:

- the upper surface (light grey), forms the "signal layer";
- the underside (black) is highly resistant to puncture and perforation by roots.

FLAGON PZ/SL should not be exposed too long to UV.

SOPREMA prides itself in working with the highest quality products. We operate with quality assurance systems, and are certified ISO 9001.

✓ Puncture resistance

✓ Avis Technique CETU

✓ Resistant to perforation by roots

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## CHARACTERISTICS

ESSENTIAL CHARACTERISTICS	Standard	FLAGON PZ/SL	EN 13491
Tensile properties			
Tensile strength (N/mm <sup>2</sup> )	EN ISO 527-3	≥ 12	
Resistance to static puncture (kN)	EN ISO 12236	> 2.2	
Water permeability	EN 14150	< 10 <sup>-6</sup> m <sup>3</sup> / m <sup>2</sup> d	
Oxidation resistance			
Variation in tensile properties (%)	EN 14575	≤ 25	
Environmental stress cracking	ASTM D 5397	not applicable	

ADDITIONAL CHARACTERISTICS	Standard	FLAGON PZ/SL
Type of material		PVC-P
Thickness (mm)	EN 1849-2	2.0 mm (-3% / +10%)
Mass per unit area (kg/m <sup>2</sup> )	EN 1849-2	2.60 (-3% + 10%)
Resistance to dynamic puncture (with GEOLAND MC 700 and FLAGON BT 2.0 or 3.0 mm) 1 layer of FLAGON PZ-SL 2 layers of FLAGON PZ-SL	NF P 84-506	Class II > 8.75 J Class 0 > 14.75 J
Cold bending (°C)	EN 495-5	< - 15
Resistance to perforation by roots	CEN TS 14416	No perforation
Tensile properties		
Tensile strength (N/mm <sup>2</sup> )	EN 12311-2	≥ 18.9 (L) ≥ 18 (T)
Elongation at break (%)	EN ISO 527-3	≥ 200 (L/T)
Static puncture:		
Resistance (N)	NF P84-507	> 400
Displacement (mm)		> 20
Dimensional stability (%)	NF EN 1107-2	< 2
Reaction to fire	EN 13501-1	E+

## PACKAGING

Number of rolls on each pallet	18
Roll length / width (m)	20 m (other lengths available on request) / 2,10 m
Color	Light grey (surface) / Black (underside)

## CE MARKING

Unique identification code of the product-type: WPSIT0273. FLAGON PZ/SL membranes are produced by SOPREMA factory in Chignolo d'Isola (Italy) and are CE marked in accordance with EN 13491 certificate no. 1085-CPR-0012.