

# FLAGON GEO P/AT 1.2, 1.5, 1.8 and 2.0 mm



## REINFORCED TPO MEMBRANE FOR DRINKING WATER TANKS

### USE

FLAGON GEO P/AT is a TPO thermoplastic membrane dimensionally stabilized with a sheet of glass fiber, specifically designed for waterproofing tanks and containers used for drinking water. This membrane is also recommended for projects of natural pools.

It has different physical-chemical properties on each side: the upper surface (light green) is treated against UV rays and the underside (black) is highly resistant to puncture and perforation by roots

This membrane lining can contain salt or fresh water and low-concentration liquid chemicals. To verify the compatibility with the specific chemical liquids, please contact [civilrock@soprema.com](mailto:civilrock@soprema.com).

On request, FLAGON GEO P/AT can be produced in several colours. Dark grey can be chosen for basins containing fish to reduce the reflectivity level.



### APPLICATION

FLAGON GEO P/AT membrane is placed on a mechanical protection geotextile.

The sheets are welded together by applying hot air, with manual or automatic welding machine. The welding can be made either with a single track or with double track. The double track allows to perform a pneumatic test with air.

FLAGON GEO P/AT is compatible with all the accessories and membranes within FLAGON TPO range.

### DESCRIPTION

FLAGON GEO P/AT membrane is a synthetic membrane made from TPO by co-extrusion. Any tears in the light green upper layer (signal layer) of the membrane can be seen immediately due to the difference in colors between the two sides. A glass fiber sheet is positioned between the two layers.

The raw materials used to produce FLAGON TPO membranes are obtained by mixing modified polyolefins with different additives by means of a process that creates a paste which is later transformed into granules.

This combination gives the synthetic membranes the following advantages:

- High resistance to ageing and weathering
- The elastomer component provides suppleness and flexibility with high mechanical and chemical resistance

FLAGON GEO P/AT may come into contact with drinking water according to the main tests of national certification under which was tested.

FLAGON GEO P/AT-F is the same product with a non-woven geotextile coupled on the lower face of the membrane.

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

✓ U.V. resistant

✓ Compatible with drinking water

✓ Signal layer



## CHARACTERISTICS

ESSENTIAL CHARACTERISTICS	Standard	GEOP AT 1.2 mm	GEOP AT 1.5 mm	GEOP AT 1.8 mm	GEOP AT 2.0 mm	EN 13361 and EN 13362
Tensile strength (N/mm <sup>2</sup> )	EN ISO 527-3	≥ 9 (L/T)				
Water permeability	EN 14150	≤ 10 <sup>-6</sup> m <sup>3</sup> / m <sup>2</sup> d				
Resistance to static puncture (N)	EN ISO 12236	≥ 750	≥ 1 000	≥ 1 200	≥ 1 350	
Oxidation resistance Variation in tensile properties (%)	EN 14575	≤ 25				
Environmental stress cracking (hours)	ASTM D 5397	≥ 200				
Resistance to weathering: Variation in tensile properties (%)	EN 12224	≤ 25				

ADDITIONAL CHARACTERISTICS	Standard	GEOP AT 1.2 mm	GEOP AT 1.5 mm	GEOP AT 1.8 mm	GEOP AT 2.0 mm
Thickness (mm)	EN 1849-2	1.2 (±5%)	1.5 (±5%)	1.8 (±5%)	2.0 (±5%)
Mass per unit area (kg/m <sup>2</sup> )	EN 1849-2	1.26	1.58	1.89	2.10
Breaking strength (%)	EN ISO 527-3	≥ 550			
Cold bending (°C)	EN 495/5	≤ - 40			
Resistance to perforation by roots	CEN TS 14416	No perforation			
Tear resistance (N/mm)	ISO 34 sample fig. 2	≥ 45			
Resistance to leaching: - variation of tensile strength (%) - mass variation (%)	EN 14415 (A and B)	< 25 < 5			

## PACKAGING

	1.2	1.5	1.8	2.0
Thickness (mm)	1.2	1.5	1.8	2.0
Number of rolls on each pallet	23	23	18	18
Roll length / width (m)	25 ml / 2.10 m	20 ml (other lengths available on request) / 2.10 m		
Colors available	Light green (surface) / Black (underside)			

## CE MARKING

Unique identification code of the product-type: WPSIT0034. FLAGON GEO P/AT membranes are produced by SOPREMA in Chignolo d'Isola (Italy) and are CE marked no. 1085-CPR-009 in accordance with EN 13361 and EN 13362.

## CERTIFICATIONS

- France:** Mentioned in CPP (Technical specifications): Basins, Tanks, Canals, Water towers and similar structures, by DEKRA.
- Italy:** CSI – Suitability for contact with drinking water Test report N° 1065/FPM/FDC/16
- UK:** DWI (n° 56.4.856) - Compatible for drinking water (Drinking Water Inspectorate)
- Spain:** APPLUS - Compatible for drinking water