

FLAGON CSL 1.2, 1.5, 1.8, 2.0 and 3.0 mm



PVC-P MEMBRANE FOR HYDRAULIC WORKS

USE

FLAGON CSL is a thermoplastic membrane made of PVC-P UV resistant, specifically for waterproofing of basins, tanks, canals and similar structures.

This membrane can contain salt or fresh water and low-concentration liquid chemicals.

The thickness of the geomembrane will be chosen depending its exposure level.

To verify the compatibility with the specific chemical liquids, please contact the technical department (civilrock@soprema.com).



APPLICATION

FLAGON CSL 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 CSL is compatible with all the accessories and membranes within FLAGON PVC range.

When necessary, FLAGON CSL geomembrane can be covered with a mechanical geocomposite protection as TILTEX.

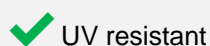
DESCRIPTION

FLAGON CSL membrane is a synthetic membrane made by co-extrusion from plasticized PVC. It has different physical-chemical properties on each side:

- the upper surface is UV resistant;
- the underside is highly resistant to puncture and perforation by roots.

Any tears in the upper layer of the membrane can be seen immediately due to the difference in color between the two sides (signal layer).

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



CHARACTERISTICS

ESSENTIAL CHARACTERISTICS	Standard	CSL 1.2 mm	CSL 1.5 mm	CSL 1.8 mm	CSL 2.0 mm	CSL 3.0 mm	EN 13361 and EN 13362	
Tensile strength (N/mm ²)	EN ISO 527-3	≥ 17,5 (L/T)						
Static puncture resistance (N)	EN ISO 12236	≥ 1 450	≥ 1 800	≥ 2160	≥ 2 450	≥ 3500		
Water permeability	EN 14150	< 10 ⁻⁶ m ³ m ⁻² d ⁻¹						
Durability: - Oxidation, variation in tensile properties (%) - Weathering, variation in tensile properties (%)	EN 14575	≤ 25						
	EN 12224	≤ 25						

ADDITIONAL CHARACTERISTICS	Standard	CSL 1.2 mm	CSL 1.5 mm	CSL 1.8 mm	CSL 2.0 mm	CSL 3.0 mm
Thickness (mm)	EN 1849-2	1.2 (±5%)	1.5 (±5%)	1.8 (±5%)	2.0 (±5%)	3.0 (±5%)
Mass per unit area (kg/m ²)	EN 1849-2	1.56	1.95	2.34	2.60	3.90
Cold bending (°C)	EN 495-5	≤ - 30				
Elongation at break (%)	EN ISO 527-3	≥ 300				
Resistance to perforation by roots	CEN TS 14416	No perforation				
Tear resistance (N/mm)	EN 12310-2	≥ 80				
	ISO 34 (fig2)	≥ 45				
Resistance to thermal ageing in water: - variation in tensile strength (%) - mass loss (%)	EN 14415 (A and B)	< 25				
		< 5				

PACKAGING

Thickness (mm)	1.2	1.5	1.8	2.0	3.0
Number of rolls on each pallet	28	23	18	18	11
Roll length / width (m)	20 ml / 2.10 ml (other lengths available on request)				
Color	Light grey RAL 7047 (top surface) / Dark grey (underside) Basalt grey RAL 7012 (top surface) / Dark grey (underside) (other on request)				

CE MARKING

Unique identification code of the product-type: WPSIT0023. FLAGON CSL membranes are produced in SOPREMA factory in Chignolo d'Isola (Italy) and are CE marked 1085-CPR-0007 in accordance with EN 13361 and EN 13362 and CE marked 1085-CPR-0599 in accordance with EN 13492.

CERTIFICATIONS

- France:** Mentioned in CPP (Technical specifications): Basins, Tanks, Canals, Water towers and similar structures, by DEKRA.
Certification ASQUAL for FLAGON CSL 12 and FLAGON CSL 15
- Russia:** NPO Fire Center Certification