

Unique identification code of the product-type: **FLAGON P/ST**

Intended uses: **- TPO membrane for waterproofing of tunnels and underground structures (EN 13491:2013)**  
**- TPO membrane for waterproofing for rising damp from the ground (EN 13967:2012)**

Manufacturer: **SOPREMA srl**  
**Via Industriale dell'Isola, 3**  
**24040 CHIGNOLO D'ISOLA (BG) - Italia**  
**www.soprema.it**

Authorised representative: **Not applicable**

Systems of AVCP: **System 2+**

Harmonised standard: **EN 13491:2013**  
**EN 13967:2012**

Notifies bodies: **Notified Body No. 1085**  
**OFI Technologie & Innovation GmbH**

Declared performances:

Essential characteristics	Test method	Performance	Harmonised technical specification	
Reaction to fire	EN 13501-1	<b>E</b>	<b>EN 13967:2012</b>	
Water tightness at 2kPa and 60kPa	EN 1928 met. B	<b>watertight</b>		
Tear resistance (N)	EN 12310-1	thickness 2,0 mm		<b>&gt; 120</b>
		thickness 2,4 mm		<b>&gt; 150</b>
Joint strength (N/50mm)	EN 12317-2	thickness 2,0 mm		<b>&gt; 450</b>
		thickness 2,4 mm		<b>&gt; 600</b>
Resistance to impact (mm)	EN 12691	thickness 2,0 mm		<b>≥ 450</b>
		thickness 2,4 mm		<b>≥ 750</b>
Tensile properties:	EN 12311-2	- Tensile strength (N/mm <sup>2</sup> )		
		longitudinal		<b>&gt; 9</b>
		transverse	<b>&gt; 9</b>	
		- Elongation (%)		
longitudinal	<b>&gt; 400</b>			
transverse	<b>&gt; 400</b>			
Resistance to static loading (kg)	EN 12730	<b>&gt; 20</b>		
Durability:	EN 1296 EN 1847	- against ageing at 2kPa and 60 kPa	<b>watertight</b>	
		- against chemicals at 2kPa and 60 kPa	<b>watertight</b>	

Essential characteristics	Test method	Performance	Harmonised technical specification
Tensile strength: - Longitudinal (MD) (N/mm <sup>2</sup> ) - Transversal (CMD) (N/mm <sup>2</sup> )	EN ISO 527-3	> <b>9,2</b> (-0,17 N/mm <sup>2</sup> ) > <b>9,2</b> (-0,17 N/mm <sup>2</sup> )	<b>EN 13491:2013</b>
Resistance to static puncture (kN) thickness 2,0 mm thickness 2,4 mm	EN ISO 12236	> <b>1,46</b> (-0,11 kN) > <b>1,93</b> (-0,13 kN)	
Water permeability:	EN 14150	< <b>10<sup>-6</sup> m<sup>3</sup> m<sup>-2</sup> d<sup>-1</sup></b>	
Durability: - Oxidation, variation in tensile properties (%) - Environmental stress cracking (h)	EN 14575 ASTM D 5397	≤ <b>25</b> ≥ <b>200</b>	

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by: **Mr. BROCCANELLO Bruno, Managing Director**  
**Chignolo d'Isola, 01/10/2017**

