

Technical Information Sheet

UltraPly™ TPO Membrane

Packaging	Part Number
1.1 mm from 1.52 m to 3.05 m x 30.5 m per roll	W56TPMXXXX(X)
1.2 mm from 1.00 m to 2.00 m x 30.5 m per roll	W56TPMXXXX
1.5 mm from 1.00 m to 3.05 m x 30.5 m per roll	W56TPMXXXX
1.8 mm from 1.00 m to 2.00 m x 30.5 m per roll	W56TPMXXXX
2.0 mm, 1.5 m x 30.5 m per roll	W56TPMXXXX

Note: membranes are available in white or grey color for various widths. Please contact your Elevate Representative for more details.

Description

The Elevate™ UltraPly TPO is a synthetic membrane made of flexible thermoplastic polyolefin (TPO) and produced with a polyester weft inserted reinforcement. The base polymer TPO is made from the incorporation of an ethylene propylene rubber into a thermoplastic matrix of polypropylene. This results in a membrane with both elastomeric and thermoplastic properties.

Preparation

Roofing structures need to provide sufficient stability to accommodate the total weight of the roofing system, including live loads and temporary loads during installation. Substrates need to be clean, smooth, dry, and free of sharp edges, loose or foreign materials, oil, grease, or other elements that may damage the membrane. All surface voids greater than 5 mm wide shall be properly filled with an acceptable fill material.

Method of Application

Unroll the membrane over the substrate and allow it to relax for at least 30 minutes before any welding or final attachment. Install the membrane in accordance with current Elevate UltraPly TPO specifications, details, and workmanship requirements. UltraPly TPO membranes are either loose laid, fully adhered or mechanically attached using appropriate fasteners and seam plates or induction plates. All seams are to be heat-welded. Allow sufficient cooling of all welded seams before probing. Refer to the Elevate UltraPly TPO guidelines for specific installation instructions.

Coverage

The dimensions of the membrane have to provide sufficient material to cover the substrate, including overlaps for seams (75 mm for seams without mechanical anchoring up to 150 mm for seams with mechanical anchoring) and base tie-in details (100 mm for tie-in in vertical – 150 mm for tie-in in horizontal). Provide an additional length (150 mm) at the top of upstands to facilitate installation.

Characteristics

Physical	
•	Excellent durability
•	High resistance against UV, ozone and (micro)bacterials
•	No plasticizers or chlorinated ingredients
•	Excellent tear and puncture resistance
•	Excellent resistance against acid rain. Avoid contact with mineral and vegetable oil, petroleum-based products, hot bitumen, and grease.

Technical	Test method	Declared value				
		1.1 mm	1.2 mm	1.5 mm	1.8 mm	2.0 mm
Thickness	EN 1849-2	1.1 mm	1.2 mm	1.5 mm	1.8 mm	2.0 mm
Mass per unit area	EN 1849-2	1.12 kg/m ²	1.23 kg/m ²	1.52 kg/m ²	1.81 kg/m ²	2.06 kg/m ²
Tensile strength (L/T)	EN 12311-2	≥ 800 N/50 mm		≥ 1200 N/50 mm		
Elongation at break (L/T)	EN 12311-2	≥ 20%				
Tear resistance (L/T)	EN 12310-2	≥ 400 N				
Watertightness	EN 1928	Pass				
Water vapor transmission μ	EN 1931	200 000 ± 30%				
Foldability at low temperature	EN 495-5	≤ -40°C			≤ -35°C	
+Δ after UV ageing	EN 1297	Δ ≤ 15°C				
Resistance to static load – soft substrate	EN 12730	≥ 20 kg				
Resistance to static load – hard substrate	EN 12730	≥ 20 kg				
Resistance to impact – hard substrate	EN 12691	≥ 500 mm	≥ 800 mm	≥ 1000 mm		
Resistance to impact – soft substrate	EN 12691	≥ 2000 mm				
Joint peel resistance	EN 12316-2	≥ 300 N/50 mm				
+Δ after heat ageing	EN 1296	Δ ≤ 20%				
+Δ after water ageing	EN 1847	Δ ≤ 20%				
Joint shear resistance	EN 12317-2	≥ 800 N/50 mm				
+Δ after heat ageing	EN 1296	Δ ≤ 20%				
Durability – UV exposure	EN 1297	Pass (> 7500 h)				
Resistance to root penetration	EN 13948	Pass				
Reaction to fire	EN 13501-1	E				
External fire performance	EN 13501-5	B _{ROOF} (t ₁ , t ₃)*				
Dangerous substances	-	None**				
Dimensional stability	EN 1107-2	≤ 0.5%				
Solar Reflectance Index (SRI)	ASTM E1980	>100 (initial value for white membrane)				

Note: As European standards continue to develop, please contact our Technical Department or visit www.holcimelevate.com for the latest updates on physical properties.

* Various B_{ROOF}(t₁, t₃) classified build-ups using the membrane are available. Please contact our Technical Department for more details.

** This product is an article as defined in article 3 of EC Regulation No 1907/2006 (REACH). It contains no components which are intended to be released under normal or reasonably foreseeable conditions of use. Based on current knowledge, this product does not contain substances of very high concern as listed in Annex XIV of the REACH regulation or in the "Candidate List of Substances of Very High Concern for Authorization" published by ECHA in concentrations above 0.1 % (w/w).

Storage

Store membranes in dry and clean conditions and their original, closed plastic wrapping away from sources of physical damage or chemical contamination. Contact our Technical Department for specific information regarding the compatibility of the UltraPly TPO membrane with certain chemicals and waste products.

Shelf Life

Unlimited.

Precautions

Take care when moving, transporting and handling to avoid sources of punctures and physical damage. Refer to Product Safety Information Sheet (PSIS) for additional safety information.

Note:

This document is meant only to highlight Elevate products and specifications based on latest knowledge and experience and is subject to change without notice. Above mentioned values are based on tested samples and may vary within applicable tolerances. For latest and complete product and detail information, please refer to the technical information posted on www.holcimelevate.com. Holcim Solutions and Products EMEA BV ("Holcim") takes responsibility for furnishing quality materials which meet Holcim's published product specifications. As neither Holcim itself nor its representatives practice architecture, Holcim offers no opinion on and expressly disclaims any responsibility for the soundness of any structure on which its products may be applied. The selection of the appropriate product and its correct application is the responsibility of the customer and not of Holcim. No Holcim Representative is authorized to vary this disclaimer.