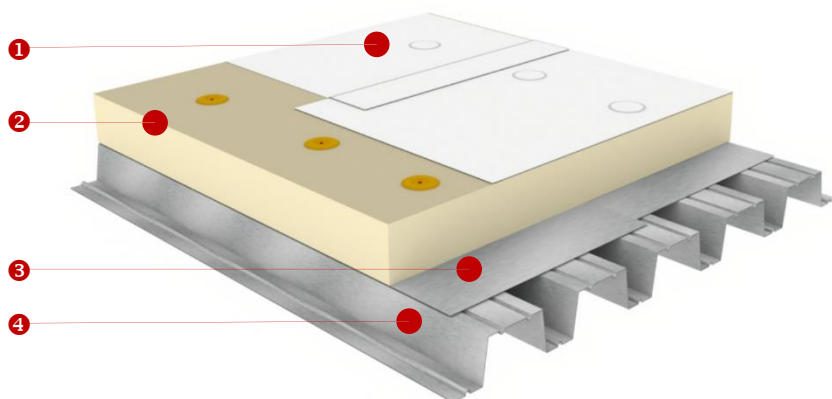


UltraPly™ TPO Single-Ply Roofing System InvisiWeld™ Induction Welding System (IWS)



Elevate's TPO InvisiWeld System is a lightweight, non-penetrating system that typically requires 25% to 50% fewer fasteners compared to conventional mechanically fastened TPO systems. The system can be installed under all weather conditions and is simple and rapid. Moreover, it provides a more balanced wind load distribution across the roof, which improves the overall roof performance.

The profiled steel deck (min. 0.75mm thick) ④ is laid to falls designed to achieve a minimum finished slope as per local requirement to encourage efficient roof drainage.

A vapor control layer ③ is placed on top of the steel deck (if required) and will restrict the passage of moisture vapour up into the insulation layer where it could otherwise condense and cause damage. Elevate also offers **V-Gard** self-adhesive SBS/reinforced aluminium foil vapor control layer.

Elevate **ISOGARD MG** roof insulation boards ② (of appropriate thickness to achieve the required roof U-value) are fastened to the steel deck using special **UltraPly TPO coated insulation plates**. These insulation plates are positioned according to pre-defined fixing patterns in function of the wind-uplift and insulation board requirements.

The **UltraPly TPO** Single Ply Roofing Membranes ① are laid out and positioned with a 75mm wide overlap instead of 150mm which results in considerable membrane savings. The use of 3.05m wide UltraPly TPO membranes is highly recommended. The underside of the UltraPly TPO membrane is welded to the InvisiWeld plates with an induction tool.

The seams of the TPO membranes are welded with the automatic welding machine in accordance with the Elevate guidelines. Subsequently, the TPO roofing membrane is welded onto the underlying TPO coated plates using an approved induction welding tool.

Once the induction welding cycle is complete, magnetic cooling clamps should be placed over the welded UltraPly TPO membrane and plate assembly until the weld cools. This will ensure a proper weld.

Induction Welding System Features Include:

- Circular System
- High wind uplift performance
- Low labor & materials cost
- Lightweight system
- Fast installation
- Aesthetics (Non-penetrating method)
- Weld Accuracy and Integrity

UltraPly™ TPO Features Include:

- Weft Scrim Reinforcement for increased durability
- High Flexibility at low temperatures (down to -40°C)
- Hot air welded seams
- UV Resistant for long service life
- Environmentally friendly
- Heat reflective, energy efficient
- May only be installed by Elevate-trained, Authorised and Licensed Contractors

Elevate System Components:

- **UltraPly TPO**
- **ISOGARD MG PIR Insulation**
- **V-Gard Vapor Control**

Specification Details & Options

Membrane	Thickness	Colours	Roll sizes
UltraPly TPO	1.1mm	White, Grey	1.52m, 2.44m, 2.64m*, 3.05m x 30.50m
UltraPly TPO	1.2mm	White, Grey	1.00m, 1.50m, 2.00m x 30.50m
UltraPly TPO	1.5mm	White, Grey	1.00m, 1.50m, 2.00m, 2.44m*, 3.05m* x 30.50m
UltraPly TPO	1.8mm	White, Grey	1.00m, 1.50m, 2.00m x 30.50m

*In white only

The UltraPly TPO single ply waterproofing is a flexible thermoplastic polyolefin membrane, incorporating ethylene-propylene rubber into a polypropylene matrix, with a polyester weft-inserted scrim reinforcement, manufactured in a ISO9001 registered facility.

Specification compliance:

UL Classified/ FM Approved
ASTM D 6878/ EN 13956 (CE Mark)
7500 hrs of Artificial Ageing as per EN 1297

Thermal insulation	Thickness	Thermal conductivity (λ -value)
ISOGARD MG	Ranging from 30 to 160 mm	0.025-0.028 W/m.K

Please consult Elevate Technical Services Department for R-Value/U-value calculations as required.

Elevate **ISOGARD MG** insulation board consists of a closed-cell polyiso (PIR) foam core laminated on both sides to a gas open mineral glassfibre facer.

Specification compliance:

EN 13165 (CE Mark)

Waterproofing Details

Lap Splices		75mm minimum overlap with welded seam for mechanical fixation side
Base Tie-in	1	UltraPly TPO membrane mechanically attached to the deck with HD seam plates & appropriate fasteners @300mm max. o.c.
	2	UltraPly TPO membrane mechanically attached to the upstand with HD seam plates & appropriate fasteners @300mm max. o.c.
	3	TPO coated insulation plates can also be used as base tie-in
Flashings		Fully adhered to all substrates with UltraPly TPO Bonding Adhesive or BA-2012
Corners	1	Corners formed using UltraPly TPO Pre-moulded inside/outside corner
	2	Corners field-fabricated using UltraPly TPO Unsupported Flashing
Pipe penetrations		Flash with pre-moulded UltraPly TPO Pipe Flashing, Field flashing using UltraPly TPO Unsupported Flashing or UltraPly TPO Penetration Pocket Kit
Drains	1	Water Block sealant installed between membrane and outlet bowl. Membrane mechanically secured to outlet using integral clamping ring
	2	Insert outlet bedded on Water Block Sealant, secured & flashed with QuickSeam Flashing.
Wall Terminations	1	Termination bar, fastened @ 200mm max. o.c. with Water Block Sealant and GP Sealant installed along top edge
	2	Metal batten bar fastened @ 150mm max. o.c. with surface mounted or inserted metal counterflashing protection
	3	Metal capping or concrete coping stones
	4	Roof edge profile using TPO QuickSeam Flashing
Surface protection		UltraPly TPO Walkway Pad to define and protect access routes

Green Building Rating Schemes

Elevate is a leading BREEAM and LEED advocate and is pleased to offer roofing, lining and insulation products which contribute to achieve high ratings. For an overview of the standards set by both BREEAM and LEED and how Elevate products can minimize your environmental impact and maximize building value, you may contact your local Elevate sales representative.

BREEAM	By using the UltraPly™ TPO Roof Mechanically Attached System, up to credits can be gained as per BREEAM standards.
LEED	By using the UltraPly™ TPO Roof Mechanically Attached System, up to credits can be gained as per LEED standards.

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.