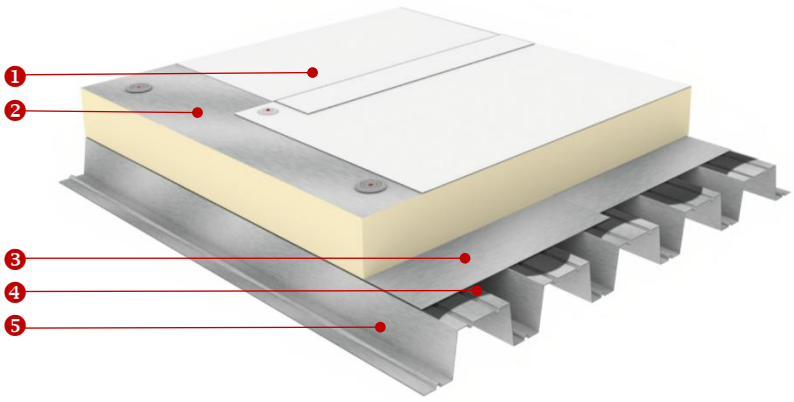
UltraPly™ TPO Single-Ply Roofing System
Mechanically Attached System (MEC)



Elevate's TPO Mechanically Attached System is a lightweight system that can be used where the roof deck is suitable for mechanical attachment.

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

A vapor control layer ❸ 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 offers **V-Gard** with self-adhesive bituminous backing aluminium foil vapor control layer. For better performance, the steel deck can be primed with **SA-19 Primer** ❹ in preparation for application of the vapor control layer.

Elevate **ISOGARD** Polyiso (PIR) roof insulation boards ❷ (of appropriate thickness to achieve the required roof U-value) are fastened to the steel deck with an approved fastening system. Fastening pattern is chosen in line with Elevate installation guidelines and to accommodate for wind loading.

The **UltraPly TPO** Single Ply Roofing Membranes ❶ are positioned with a 150mm wide overlap. Elevate **HD Seam Plates** or other approved fastening system, are positioned within the overlap, coinciding with the steel deck crowns beneath. The HD seam plates are secured to the steel deck using Elevate **All Purpose Fasteners** or other approved fasteners. The membrane seam is then sealed over by hot-air welding. Spacing of the plates and/or fasteners differs to accommodate for wind loadings and are positioned according to the parameters of the wind load calculation based on local or international standards.

Mechanically Attached System Features Include:

- Adaptable to unusual roof configurations
- High wind uplift performance
- Economic solution
- Lightweight system
- Fast installation

UltraPly™ TPO Features Include:

- Weft Scrim Reinforcement for increased durability
- High Flexibility at low temperatures (down to -40ºC)
- 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 AK** PIR
- **ISOGARD MG** PIR
- **V-Gard** Vapor Control
- **HD Seam Plates**
- **All Purpose Fasteners**
- **SA-19 Primer**

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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

The roll width will be selected to achieve the correct frequency of fasteners /m^2 as calculated to resist wind uplift as per project requirement.

Thermal insulation	Thickness	Thermal conductivity (λ-value)
ISOGARD AK	Ranging from 30 to 160 mm	0.023 W/m.K
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 AK** insulation board consists of a closed-cell polyiso (PIR) foam core laminated on both sides to a gas tight multi-layered aluminium complex.

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		150mm 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.
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
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	Up to **24 credits** can be contributed by using the UltraPly™ TPO Roof Mechanically Attached System, as per BREEAM Green Building Rating Scheme.
LEED	Up to **30 credits** can be contributed by using the UltraPly™ TPO Roof Mechanically Attached System, as per LEED Green Building Rating Scheme.

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