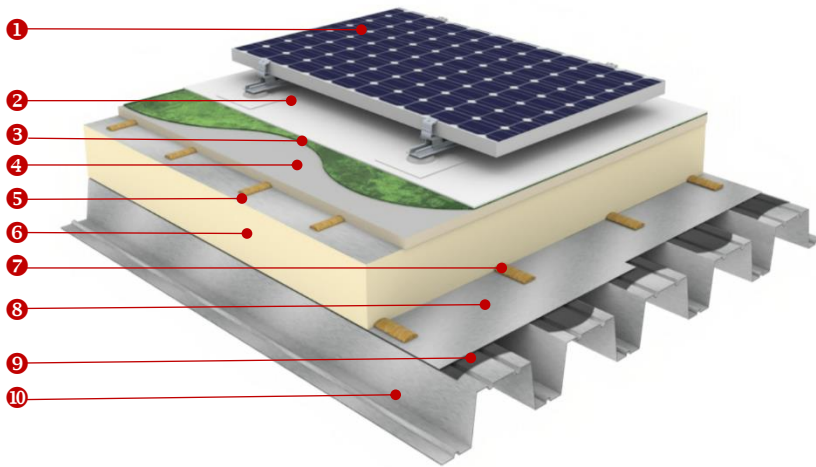


UltraPly™ TPO Single-Ply Roofing System Fully Adhered System with Photovoltaic Roof



Elevate UltraPly TPO roofing membranes offer excellent weathering performance, first-class mechanical resistance, outstanding durability and can withstand very high or very low temperatures. UltraPly TPO membrane can easily be combined with any type of PV installation due to its reflectivity, high temperature resistance and outstanding wear and tear resistance.

The profiled steel deck (min. 0.75mm thick) 10 is laid to falls designed to achieve a minimum finished slope as per local requirement to encourage efficient roof drainage.

A vapor control layer 8 is placed on top of the steel deck and will restrict the passage of moisture vapor up into the insulation layer where it could otherwise condense and cause damage. Elevate offers **V-Gard** with self-adhesive bituminous backing/reinforced aluminium foil vapor control layer. The steel deck has to be primed with **SA-19 Primer** 9 in preparation for application of the vapor control layer.

Elevate **ISOGARD** Polyiso (PIR) roof insulation boards 6 (of appropriate thickness to achieve the required roof U-value) are adhered to the vapor control layer on beads of **I.S.O. Twin-Pack** insulation adhesive. 7 The spacing between beads is determined by the wind uplift requirement.

A high-density **ISOGARD HD** cover board 4 is adhered to the thermal insulation boards on beads of **I.S.O. Twin-Pack** insulation adhesive. 5

The **UltraPly TPO** Single Ply Roofing Membrane 2 is fully adhered to the cover boards using Elevate **Bonding Adhesive**. 3

The photovoltaic installation 1 is then mounted over the UltraPly TPO membrane. For the protection of the Elevate UltraPly TPO membrane in areas that subject to periodic traffic for maintenance of technical equipment, Elevate **UltraPly TPO Walkway Pads** must be installed.

Fully Adhered System Features Include:

- Suitable for unusual roof configurations
- Lightweight system
- Fast coverage
- Aesthetics
- High wind uplift performance
- Perfectly suited for green roofs and roofs with PV installations

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**
- **UltraPly TPO Walkway**
- **UltraPly Bonding Adhesive**
- **BA-2012 Bonding Adhesive**
- **ISOGARD HD Cover Board**
- **ISOGARD AK PIR**
- **ISOGARD MG PIR**
- **I.S.O. Twin Pack Adhesive**
- **V-Gard Vapor Control layer**
- **SA-19 Primer**

Specification Details & Options

Membrane	Thickness	Colours	Roll Sizes
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 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 gastight multi-layered aluminium complex.

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

Specification compliance:

EN 13165 (CE Mark)

Cover Board	Thickness	Density	Compressive Strength
ISOGARD HD	12.7 mm	80 kg/m ³	> 800 kPa

ISOGARD HD enhances the durability of roofs requiring frequent access, green roofs and photovoltaic roofs

Membrane Bonding Adhesives	Application Method
UltraPly Bonding Adhesive	Super spreader or roller applied contact adhesive
BA-2012	Super spreader or roller applied contact adhesive

Waterproofing Details

Lap Splices		75mm minimum overlap with welded seam
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		Photovoltaic installation by specialist

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 28 credits can be contributed by using the UltraPly™ TPO Roof System in combination with solar panels, as per BREEAM Green Building Rating Scheme.
LEED	Up to 38 credits can be contributed by using the UltraPly™ TPO Roof System in combination with solar panels, as per LEED Green Building Rating Scheme.

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.