



ARDEX WPM 612 TPO

Roofing Membrane

BRANZ Appraised No. 728

CodeMark No. AQ-040516-CMNZ

E2/AS1 Alternate Solution

Eco Friendly Membrane – Heat reflective and energy efficient roof membrane

No toxic emissions – No plasticisers or chlorinated ingredients

Lightweight Membrane – Offering a high variety of installation options for low slope roofing applications

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DESCRIPTION

ARDEX WPM 612 (TPO Roofing Membrane) is a flexible Thermoplastic Polyolefin roofing membrane made from the incorporation of a ethylene propylene rubber into a polypropylene matrix and produced with polyester weft inserted reinforcement.

PREPARATION

Roofing structure needs to be stable enough to support the temporary loading. Substrates need to be clean, smooth, dry and free of sharp edges, loose or foreign materials, oil, grease and other materials that may damage the membrane. All surface voids greater than 5mm wide shall be properly filled with an acceptable fill material.

APPLICATION

Place ARDEX WPM 612 (TPO Roofing Membrane) as close as possible to its final position. Inspect the wrapper and ARDEX WPM 612 (TPO Roofing Membrane) roll for damage before and during the installation.

Unroll ARDEX WPM 612 (TPO Roofing Membrane) and prior to any attachment, cutting or welding, allow each panel to relax a minimum of 30 minutes. Cut a cross-shaped opening above every drain to evacuate excess ponding water, in case of sudden rainfall.

ARDEX WPM 612 (TPO Roofing Membrane) panels shall be installed in a fashion so that field and flashing splices are installed to shed water. Straight cuts are very important for a neat and easy application.

Allow ample material for splicing determined by the type of seam and tie-ins.

Temporary ballasting during installation may be required to keep the membrane in place until it is secured to the substrate. Suggested temporary ballasting includes sand bags and other non-abrasive materials such as rubber tyres, etc. Never leave the project without temporary ballasting loose laid sheets.

COVERAGE

The dimensions of the membrane are calculated to cover the substrate, including seam overlaps (75mm for standard seams – 150mm for seams with mechanical anchoring in the seam) and upstands. Provide an additional length (150mm) at upstands for easy manipulation.

PHYSICAL CHARACTERISTICS

- Excellent durability and tear and puncture resistance
- High chemical, (micro) bacterial, UV and weathering resistance
- No plasticisers or chlorinated ingredients
- Avoid contact with oil and petroleum based products, grease and hot bitumen

TECHNICAL CHARACTERISTICS

Property	Test Method	Value
Watertightness	EN 1928 (A)	Pass
Tensile strength (both directions)	EN 12311-2	≥800 MPa
Elongation at reinforcement break	EN 12311-2	≥ 20%
Resistance to static loading (EPS & concrete)	EN 12730 (B)	≥ 25kg
Resistance to impact (EPS & concrete)	EN 12691	≥ 10mm
Tear resistance L/T	EN 12310-2	≥ 400 / 400 N
Joint peel resistance	EN 12316-2	≥ 100 N/50mm
Joint shear resistance	EN 12317-2	≥ 800 N/50mm
UV exposure	EN 1297	Pass
Foldability at low temperature	EN 495-5	≥ -45°C
External fire performance	EN 13501-5	B _{ROOF} (t1)
Reaction to fire	EN 13501-1	E
Root resistance	pr EN 13948	Pass

PACKAGING

Thickness 1.14mm

Width 3.05m (2.0m rolls available on indent)

Length 30.5m

Weight 1.54 kg/m²

STORAGE

Store away from sources of puncture and physical damage. Store away from ignition sources and open flame. Unlimited Shelf Life.

PRECAUTIONS

Exercise caution when lifting, moving, transporting, storing or handling membrane rolls to avoid sources of punctures and possible physical damage.

Contact ARDEX Technical Services Department for specific recommendations regarding chemical or waste product compatibility with ARDEX WPM 612 (TPO Roofing Membrane).

ARDEX WPM 615 TPO

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ENVIRONMENTALLY FRIENDLY

Heat Reflective

White colour results in a heat reflective index of 70% and retains a high proportion of this through its service life due to the colour fastness and retention of the membrane.

No Toxic Emissions

The membrane system's chlorine-free, non-halogenated and plasticiser-free formulation in combination with the hot-air welded seaming method produce no emissions harmful to the environment.

Bacteria Propagation Resistant

TPO Roofing Membrane exhibits excellent resistance to the propagation of discolouring bacteria that reduces the heat reflectivity and energy efficiency.

Low Carbon Footprint

The TPO membrane can also be easily recycled and has a lower production footprint than comparable systems.

GREEN ROOF SYSTEM

Due to ever increasing concern for the environment, green roofs are becoming a regular part of our landscape. TPO Roofing Membrane has successfully passed the FLL test for root penetration resistance in green roofs. It is an ideal membrane for combination with extensive green roof systems using lightweight and low maintenance sedum vegetation.

The ecological benefits of a green roof system are numerous:

Reduction of the urban heat island effect

Prevents reflection of the heat into the surrounding atmosphere. Plant transpiration resulting in cooling the atmosphere.

Reduction of energy costs

Excellent natural insulation properties to help keep the cold out in winter and the heat out in summer.

Storm water management

Through water retention and increased evaporation.

New habitats for plants & animals

Green roofs create a natural habitat for local wildlife.

Improved air quality

Purification of the air by filtering dusts and pollutants and converting CO₂ into oxygen.

Reduction of noise pollution

Excellent sound insulators reducing the noise pollution from external sources.

ACCESSORIES

ARDEX WPM 623 - TPO Flashing

Non reinforced TPO membrane to be used in situation where a pre-moulded accessory is not available. Supplied as a 0.61m x 15.25m roll in white or grey.

ARDEX TPO Inside/Outside Corners

Flexible non reinforced TPO specifically designed for flashing inside or outside corners. Supplied as a 76mm x 76mm x 82mm corner with a 12.7mm radius on all edges of the raised corner, in white or grey.

ARDEX TPO Universal and Large Pipe Flashing

Supplied in white or grey.

ARDEX TPO QuickSeam Flashing

Non reinforced TPO membrane laminated to a white cured seaming tape for flashing metal roof edging profiles and other details. Supplied as a 0.14m x 30.5m roll, in white.

ARDEX 649 - Contact Adhesive

Contact adhesive for bonding ARDEX WPM 612 TPO membrane to wood, metal and other acceptable substrates. It is supplied as a yellow colour in 18.9 litre pails.

ARDEX WPM 651 - TPO Cut Edge Sealant

Polymer based sealant designed to seal cut edges of ARDEX WPM 615 TPO membrane where the scrim reinforcement is exposed. White or grey in cartons of 4 bottles.

ARDEX WPM 657 - TPO General Purpose Sealant

High quality sealant with excellent adhesion to a variety of surfaces, used as a termination bar caulk and cut edge/seam sealant. Supplied in cartridges, coloured white.

ARDEX WPM 659 - TPO Pourable Sealant

A two component polyurethane sealer to seal around small pipe penetrations, clusters of pipes, I beams etc in a penetration pocket detail. In 3.78 litre packs, coloured white.

ARDEX All Purpose Fasteners

Are specifically designed for mechanical attachment of the ARDEX TPO membrane to steel, plywood and timber decks. They are supplied as 32mm long screws, coloured red.

ARDEX HD Seam Plate

To be used for the attachment of the ARDEX TPO membranes to approved substrates using ARDEX All Purpose Fasteners. 60.3mm diameter plates.

ARDEX Pressure Seal

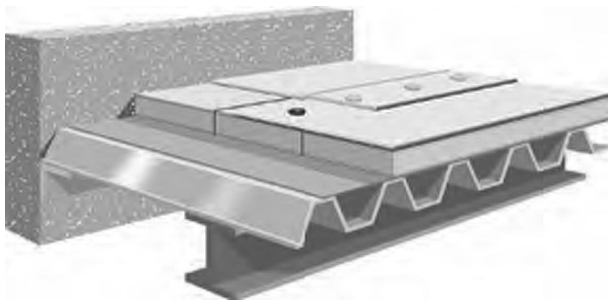
Designed for termination of ARDEX TPO membrane against smooth walls in all roofing situations. supplied as 3.1m x 35mm x 2.2mm thick bars.

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INSTALLATION OPTIONS

ARDEX can offer a variety of installation options for both renovation and new built applications.



MECHANICALLY ATTACHED

The ARDEX TPO Mechanically Attached System is a lightweight system, suitable for roofs that cannot carry the additional load of ballast, where the roof deck is suitable for mechanical attachment.

System Features

- Adaptable to unusual roof configurations
- High wind uplift performance
- Low material costs
- Lightweight ideal for installation to metal roofs over insulation.

Ideal for installation to metal roofs over insulation.



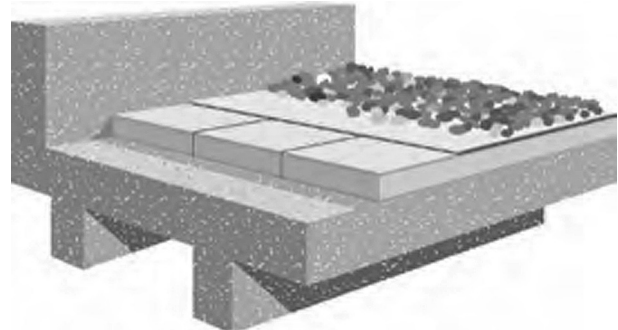
FULLY ADHERED

The ARDEX TPO Fully Adhered System is a lightweight system with outstanding design flexibility. It is suitable for contoured roofs with irregular shape and any roof with limited load bearing capacity, provided the substrate is compatible with adhesives.

System Features

- Applicable on any slope
- Applicable to unusual roof configurations
- Lightweight
- High wind uplift performance

Ideal for installation to concrete and masonry roofs.



BALLASTED & LANDSCAPED

The ARDEX TPO Ballasted System is the most economical TPO roofing system available and is suitable for a wide variety of buildings.

System Features

- Excellent choice for Green roofs
- Fewer seams
- Large choice of compatible substrates
- Faster installation
- Low installation costs
- Excellent fire rating

Suitable for light/medium traffic decks and roofs.

FOR LATEST UPDATES AND ADDITIONAL INFO

Please consult our website at www.ardex.co.nz Testing results and/or copies of Approval Documents for above are available upon request.

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