
ARDEX TPO ROOFING SYSTEMS



SYSTEM **ARDEX**
PREMIUM PERFORMANCE





LEADING INDUSTRY INNOVATION FOR OVER 50 YEARS

With a proven track record of pioneering innovative waterproofing solutions for over half a century, ARDEX's commitment to uncompromising quality has resulted in products that stand the test of time and moisture.

The widest range of fit for purpose products

From sub floor to rooftop, ARDEX waterproofing solutions have been engineered for even the most complex projects, with a wide range of highly tailored solutions. Over many, many years, we've established strong relationships with architects and builders. With this access to great insights into various job requirements and working methods, we have innovated and created a vast range of solutions for even the most complex of jobs. Our diverse range of solutions can be found across both the commercial and residential construction market.

Spec it right

A great range of products is only part of the equation in creating better buildings. You can trust in our vast industry and product knowledge to ensure you specify the right product for the job. We offer one-on-one technical support to find the perfect fit for your project.

The smart choice

Being light in colour makes ARDEX TPO the smart choice when seeking an energy efficient, environmentally friendly roofing system that combines aesthetics with strong resistance to ultraviolet radiation, weathering, and outstanding seam strength. The scrim-reinforced membrane combines the durability of rubber with the heat weldability of a thermoplastic in a flexible sheet with excellent installed characteristics.

What is ARDEX TPO Membrane?

ARDEX TPO Membranes are a proprietary thermoplastic polyolefin combining polypropylene and ethylene propylene rubber. It's one of the safest products on the market due to the application process involving hot air welded seams and water based materials being used to adhere the product. ARDEX TPO is manufactured by Firestone Building Products, who have almost 40 years in the commercial roofing industry, building upon a 100-year-plus heritage of success and innovation in plastics and rubber polymer technology.







CASE STUDY

Building	New Plymouth YMCA
Area Covered	1200m ²
Applicator	Millwards Roofing Ltd

System

- 35mm Expol installed lengthwise down the pans.
- 58.4mm ARDEX Polyiso insulation board installed across the roof over the Expol and roof ribs.
- 30m x 3m x 1.14mm ARDEX WPM 612 TPO sheet membrane, fully adhered to the ARDEX Polyiso board and mechanically fastened around the perimeter, laps were heat welded.
- Approximately 10,500 x 114mm fasteners and 80mm diameter Insulation plates were used to fasten the Expol and insulation board to the existing roof. The number of fasteners differed from the field, perimeter and corner zones taking into consideration the wind uplift in those areas.

Project description

The main stadium roof of New Plymouth YMCA is a trapezoidal metal roof (400mm pans and 40mm upstands) with a central ridge line.

The existing roof was an insulated panel roof, 50mm in thickness, installed 15-20 years ago. The panels had a horizontal joint half way up the roof sheet as sheet length was limited at this time.

As the underside of the panel roof was visible from inside the building, removing the panels would have meant having to close the facility. This was undesirable for the client. ARDEX products and systems were chosen because they allowed use of the main stadium court facilities during the process.

ARDEX WPM 612 (being a 3.0 m wide roll) in grey colour was used over a 58mm ARDEX Polyiso panel and a 35mm polystyrene packer sheet placed in the sheet pans. The ARDEX Polyiso sheet was screw fixed to the existing roof.

As TPO material is welded at the sheet joints, portable welding machines could be used on all joints. With three workers, the project was completed within three weeks of starting, with a day or two lost due to very strong winds.



THE ECO-FRIENDLY MEMBRANE

...Because the environment matters

ARDEX is committed to providing waterproofing solutions of outstanding quality and optimal environmental friendliness. ARDEX TPO is a heat reflective and energy efficient roofing membrane.

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 superior colour fastness and retention.

No toxic emissions

The membrane system produces no emissions harmful to the environment thanks to its chlorine-free, non-halogenated and plasticiser-free formulation, combined with the hot-air welded seaming method.

Bacteria propagation resistant

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

Low carbon footprint

TPO membranes have the some of the best Global Warming Potential (GWP) ratings out of the main roofing membrane types. As measured by the ERA environmental Life-Cycle Analysis, TPO membranes require only 20.4 years to achieve environmental equivalency - as compared to 49 years for bitumen-based membranes.

GREEN ROOF SYSTEMS

Green roofs are becoming a regular part of our building landscape

ARDEX TPO membranes have 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.



Why choose a green roof system?

- Preventing heat reflection and allowing plant transpiration to help cool the surrounding atmosphere reduces the urban heat island effect.
- Energy costs are reduced thanks to the excellent natural insulation properties.
- Storm water management is improved through water retention and increased evaporation.
- Air quality is improved by filtering dusts and pollutants and converting CO2 into oxygen.
- Excellent sound insulating properties reduce noise pollution from external sources.
- Green roofs create a natural habitat for local wildlife.





CASE STUDY

Building	Pilot Bay Apartments, Mt Maunganui
Area Covered	850m2
Architect	DCA Architects of Transformation
Builder	Alaska Construction
Applicator	Alpha Waterproofing & Roofing Ltd

System

- Roof - ARDEX WPM 615 grey, 1.5mm TPO over ARDEX Polyiso warm roof and ply substrate.
- Decks - ARDEX WPM 615 over concrete substrate, raft timber cover

Project description

Pilot Bay Apartments is a luxury, new build, multi-level apartment complex in one of Mount Maunganui's most sought-after locations. As the apartments are designed to be low maintenance and durable in the harsh local environment, ARDEX products and systems were a natural choice, and as usual, performed to expectation.



RELIABLE SOLUTIONS FOR EVERY NEED

ARDEX TPO membrane offers superior weatherability and durability.

Containing no plasticisers, ARDEX TPO membranes has outstanding resistance to shrinkage and cracking from UV radiation and ozone exposure. In fact, the stable inert formula components can provide up to 20 years durability as an exposed membrane in the New Zealand environment.

APPLICATION

ARDEX TPO is a high performance waterproofing membrane that is simple to install and safe to use.

Secure hot air welded seams

Hot-air welded seams result in high strength and a fully secure, consistent seam quality. Heat welded seams form a homogeneous bond by fusing the top and bottom sheets together. ARDEX TPO's seaming process enables it to be installed year-round in a variety of weather conditions.

Safe installation

Utilising a non-flammable, non-hazardous system, the ARDEX TPO membranes are extremely safe with no risk of fire or risk to health. Hot air welding eliminates the need for naked flames on site for the installation.

Fast and easy

The single ply protection requirement and fast hot air welded seams combine for a rapid installation process. ARDEX TPO is available in 2.0m widths providing fast, economical coverage. At 1.53 kg/m² it is lightweight, offering a variety of installation options for low slope roofing applications in both refurbishment and new construction projects.

QUALITY ASSURANCE

Drawing on our vast industry and product knowledge, we offer one-on-one technical support and a robust guarantee and warranty.

System security

Backed by an international company that has been successfully involved in the building and construction industry for over 50 years, you can stake your reputation on the ARDEX TPO roofing system. Our products have been developed in the total SystemARDEX philosophy and the technology is based on over 100 years development by Firestone Building Products.

Technical backup

ARDEX offers comprehensive technical backup and support. Our dedicated Technical Services Facility, R&D facility and experienced Sales and Service field staff provide assistance in writing specifications for TPO roofing membranes to ensure the best result possible.

COST EFFECTIVE

The ARDEX TPO roofing system is extremely cost effective compared to equivalent roofing membrane systems.

COMPLETE SYSTEMARDEX INSTALLATION

We also offer a complete range of accessories for our TPO Roofing Systems to meet the requirements of various roofing applications and installation details. This allows building owners, specifiers and installers the convenience to obtain all components necessary for a complete TPO Roofing System from ARDEX.

INSTALLATION

ARDEX have a variety of installation options to meet the most demanding rooftop challenges for both renovation and new built applications.

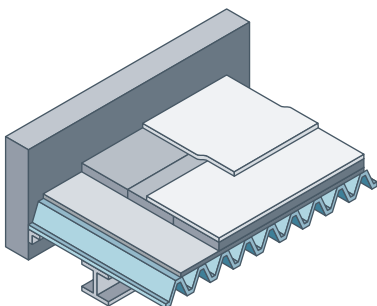
ARDEX TPO's lightweight, flexible, scrim-reinforced membrane is engineered to provide dependable performance in most commercial roofing applications.

MECHANICALLY ATTACHED

The ARDEX PolyIso Mechanically Attached System is lightweight and suitable for reroofing over or new metal deck trays. The TPO membrane is then fully adhered over the PolyIso Board.

System features

- Adaptable to unusual roof configurations
- High wind uplift performance
- Low material costs
- Lightweight
- Excellent improvement of insulation properties of existing buildings

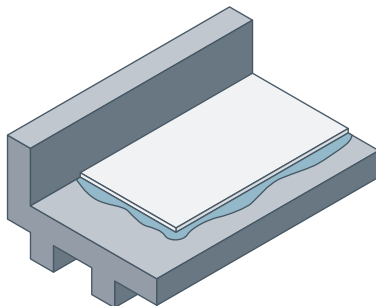


FULLY ADHERED

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

System features

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

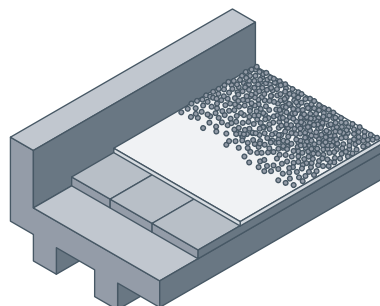


BALLASTED AND LANDSCAPED

The ARDEX TPO Ballasted System is the most economical TPO roofing system available and is suitable for a wide variety of buildings. Suitable for light/medium traffic decks and roofs.

System features

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





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