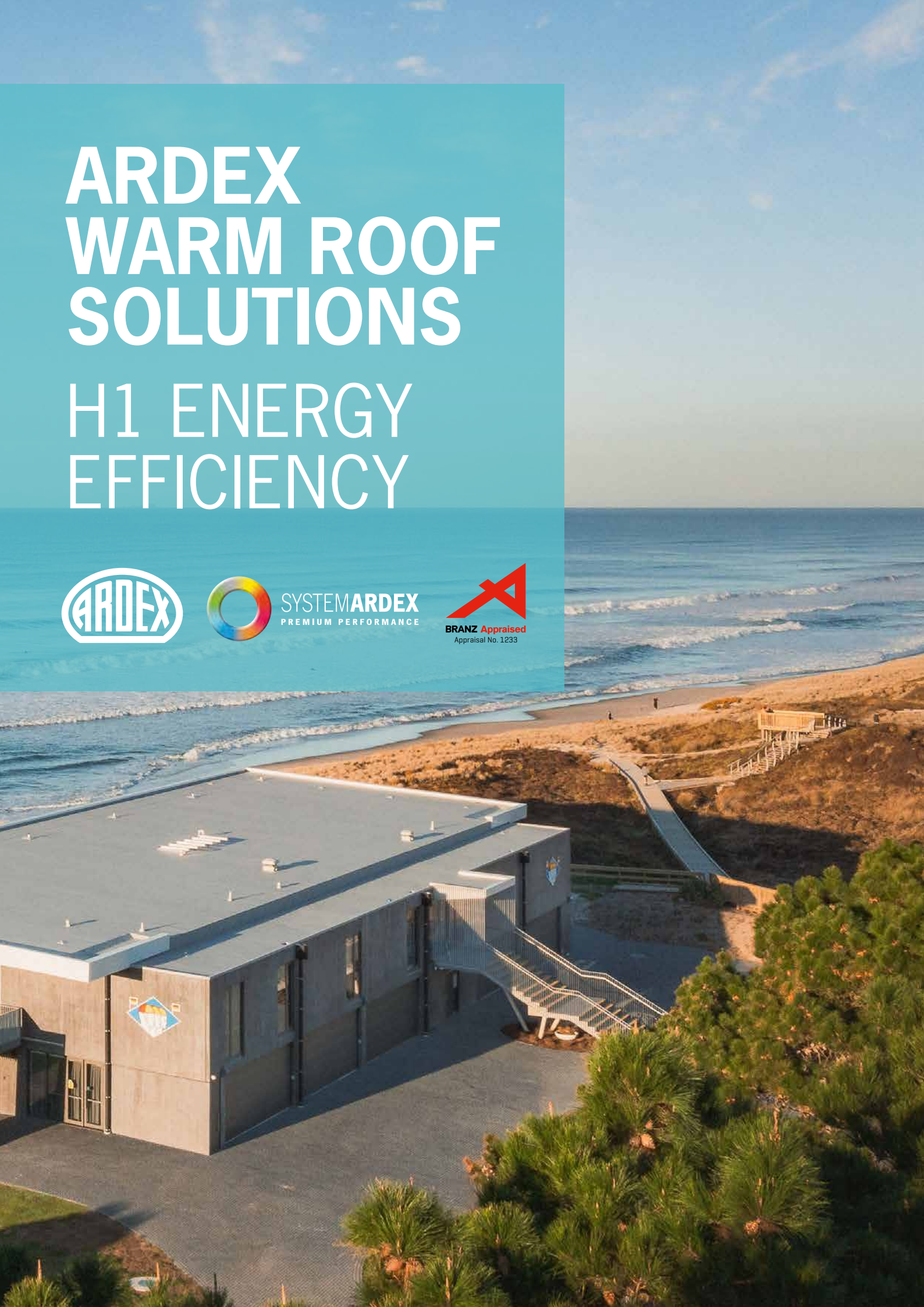


ARDEX WARM ROOF SOLUTIONS

H1 ENERGY EFFICIENCY



SYSTEMARDEX
PREMIUM PERFORMANCE



THE FUTURE OF ROOFING

ARDEX has been producing roofing membrane systems worldwide for over 50 years. We offer a complete range of high performing roofing solutions as individual as your building.

Already a strong trend internationally, we're bringing the benefits of warm roofing to New Zealand buildings. Enhance thermal control by adding superior insulation directly below the roof cladding, creating warmer, healthier, and more energy efficient buildings.

Warm roofs are an attractive solution for designers when it comes to meeting the changes to Building Code H1/AS1 and H1/AS2.

They offer low height build up while achieving excellent R-values with a range of cladding finishes to suit specific customer needs. Consider an ARDEX warm roof solution for your next project, be it a traditional substrate or one constructed from metal deck which could show saving to the cost of the project.

DISCLAIMER

The technical details, recommendations and other information contained in this catalogue are given in good faith and represent the best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly, and in accordance with any applicable New Zealand Standard. Our instructions and recommendations are only for the uses they are intended.

We also reserve the right to update information without prior notice to you reflecting our ongoing research and development programme. Country specific recommendations (depending on local standards), Codes of Practice, Building Regulations or Industry Guidelines, may affect specific installation recommendations. The supply of our products and services is also subject to certain terms, warranties and exclusions, which may have already been disclosed to you in prior dealings or are otherwise available to you on request. ARDEX reserves the right to change packaging and weight of products at any time without notice due to production requirements. © ARDEX New Zealand Ltd 2024. All aforementioned products are the trade marks of ARDEX New Zealand Ltd, its licensors and affiliates.

WHAT IS H1?

The recent changes to Building Code: H1 Energy efficiency have been implemented to improve the comfort and efficiency of our Kiwi homes and workspaces.

According to the Ministry of Business, Innovation and Employment (MBIE) the updates to H1 will achieve a reduction of around 23% energy use in the heating and cooling of large non-residential buildings and a potential reduction of up to 40% in new residential buildings. In addition, these changes should positively impact occupants health and help towards New Zealand's climate change mitigation commitments.

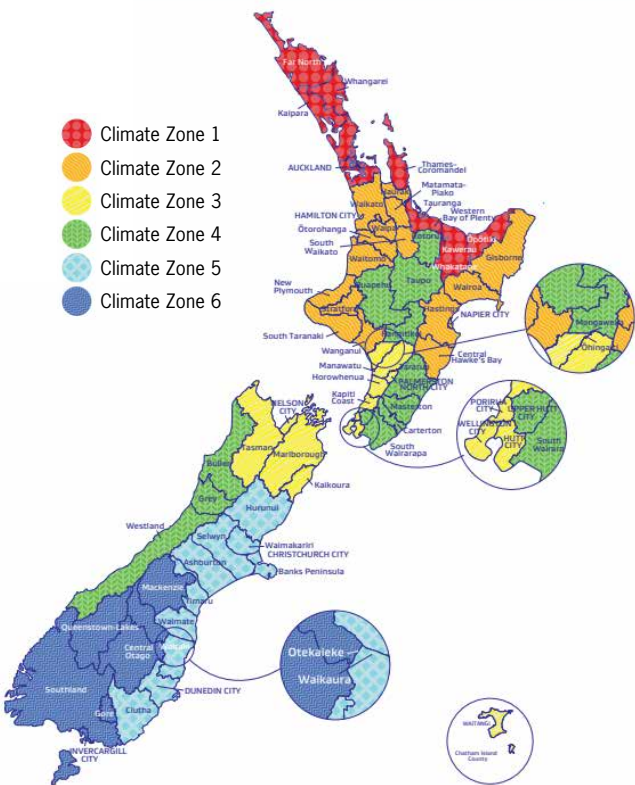


TABLE 1

Table details changes to roof installation requirements within the new editions of H1/AS1 and H1/ VM1 for housing and small buildings.

Minimum Construction R Values

Building element	Climate Zone					
	1	2	3	4	5	6
Roof						

R6.6

TABLE 2

Table details changes to roofing installation requirements and also the creation of new documents for large buildings - H1/AS2 and H1/VM2.

Minimum Construction R Values

Options	Climate Zone					
	1	2	3	4	5	6
Roof	R3.5	R4.0	R5.0	R5.4	R6.0	R7.0

COMPLIANCE PATHWAYS

There are three methods of demonstrating compliance with Building Code clause H1.

Schedule method for houses and buildings less than 300m² and window area no greater than 30%. To understand where this method can be used consult the BRANZ Schedule Method Tool <https://www.branz.co.nz/energy-efficiency/h1-schedule-method-tool/>.

Calculation method allows for different combinations of insulation solutions for houses and buildings less than 300m² and window area no greater than 40%. Consult the BRANZ Calculation Method Tool <https://www.branz.co.nz/energy-efficiency/h1-calculation-method-tool/>.

Modelling method. Larger buildings (excluding industrial buildings) and those with window areas greater than 40% are likely to require thermal modelling, in this situation consult a professional.

ARDEX ROOF SOLUTIONS

Specifying the installation of an ARDEX total roofing system provides you with a single source of quality design, quality materials and warranty responsibility.

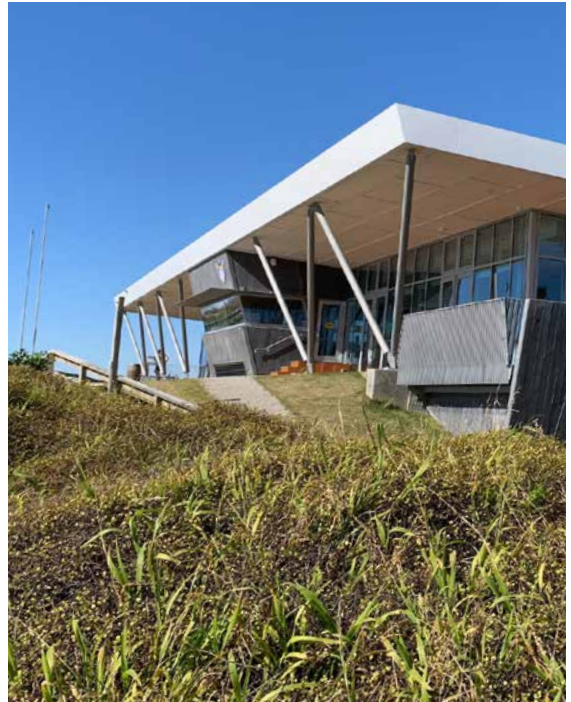
The ARDEX Warm Roof system is appraised by BRANZ for durability and thermal performance for installations of both roofs and decks. This insures a warm roof solution that the New Zealand construction industry can have confidence in and a solution with an easy path to compliance.

Specify ARDEX trained installers: ARDEX offers training programmes for roofers, ensuring that they have the knowledge and skills necessary to install ARDEX products correctly.

Market leading **System ARDEX warranty** is project specific and warrants that the System ARDEX combination of products that form the total system are free from defects, are 100% compatible and the system combination is suitable for the purpose intended. The period warranted will be project specific. Involve ARDEX at the start of your project to access this warranty.

ARDEX offer a **wide range** of roofing membrane options to meet your clients aesthetic needs and budget. From the locally manufactured WeldTec® range, to TPO and torch on options from world leading manufacturers, ARDEX high-quality roofing products that are designed to meet the specific needs of the New Zealand climate. These products are designed to withstand extreme weather conditions, such as high winds and heavy rain, ensuring that the roof remains watertight and secure.

Local expertise and support from a team of experienced roofing experts who can provide advice and guidance on the best roofing solutions for your specific needs. ARDEX help you with specifications and design advice, compliance support, product supply right through to completion, ARDEX provides the complete package.



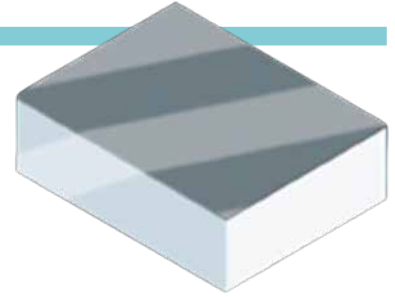
ARDEX is committed to sustainability and recently, achieved carbonreduce certification from Toitū Envirocare. ARDEX has a long-term plan in place to reduce carbon emissions and minimise climate impact, with an annual audit of gross emissions completed by Toitū to measure progress.



MECHANICALLY FIXED VS FULLY ADHERED SYSTEM

A Mechanically Fixed System will decrease the thermal performance of the entire system. The ideal solution is to install two layers offset and use the twin pack polyiso adhesive system to avoid the majority of thermal bridging.

ARDEX PIR INSULATION BOARD



High R-values at lower thickness is what sets polyisocyanurate (PIR) insulation boards apart from other forms of insulation, making it ideal for commercial and residential roofing applications where space is a premium.

ARDEX PIR board roofing insulation consists of a closed-cell polyiso foam core laminated with a glass reinforced mat facer on both surfaces. The foam technology does not contribute to the depletion of the earth's ozone layer (zero ODP) and uses a HCFC-free blowing agent.

This lightweight, easy-to-handle insulation is suited for direct application onto steel roof, concrete or wood deck and provides outstanding thermal resistance, dimensional stability and compressive strength.

R-VALUE AND THICKNESSES

Available in flat boards of 1.2m x 2.4m

Thickness (mm)	R-Value @ 23°C (mK/W)	Weight (kg/m²)
20	0.93	0.97
25	1.17	1.19
30	1.40	1.41
40	1.87	1.85
50	2.34	2.29
60	2.80	2.73
70	3.27	3.17
75	3.50	3.39
80	3.74	3.61
90	4.21	4.05
100	4.67	4.49
140	6.54	6.25
150	7.01	6.69

DURABILITY STATEMENT

As PIR does not sag or absorb moisture, you can be confident of consistent performance which will last the full lifetime of the building. PIR is a hydrophobic product, meaning it does not absorb water. This allows the thermal performance and integrity of the product to be retained regardless of water exposure.

FIRE PERFORMANCE

PIR will self-extinguish as soon as cause of fire is removed. PIR foam is a thermosetting material. It does not melt, flow or drip when exposed to fire and it will form a strong char that helps protect the foam core and prevent flame spread within the panels.

ARDEX POLYISO has been certified to NZBC verification method C/VM2 Group 2-S

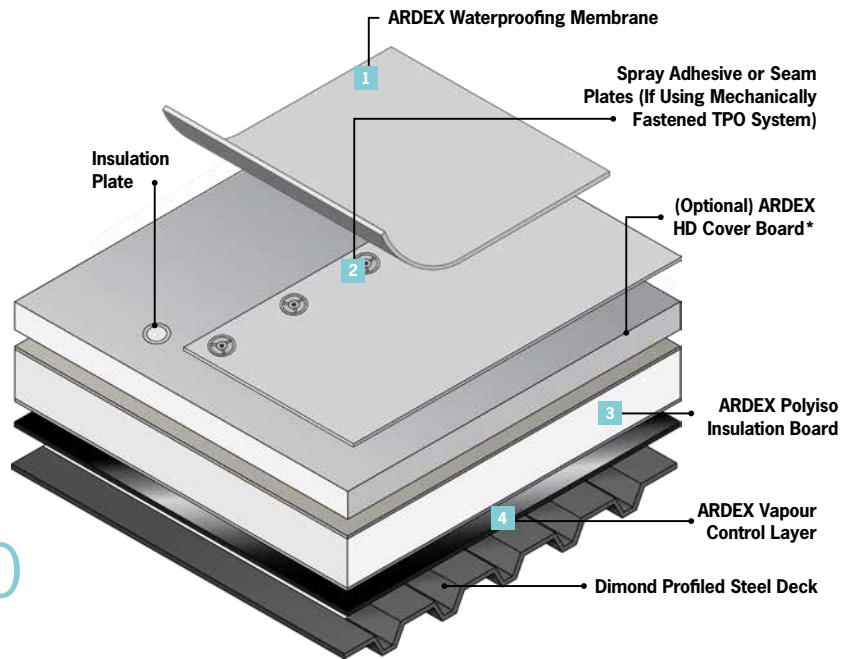
- Manufactured in an ISO 9001 Registered Facility
- Manufactured and tested to AS1 366.2/ASTM 2498

PRODUCT PROPERTIES

Property	Value
Density	38 ~ 42 kg/m³
Compressive Strength	≥0.15 MPa
Shear Strength	≥0.11 MPa
Dimensional Stability	≥3% (70°C @ 95%RH for 20hrs) ≥1% (-10°C @ 95%RH for 20hrs)
Width	1200 mm
Length	2400 mm
Water Vapour Transmission Rate	10-15g/ m².24 hours

WARM ROOF SYSTEM METAL DECK

ULTRAPLY™ TPO



Option A UltraPly™ TPO



1 ELEVATE ULTRAPLY™ TPO 1.14mm

1.14mm TPO large-scale roofing membrane

OR 2 ELEVATE ULTRAPLY™ TPO 1.5mm

1.5mm TPO large-scale roofing membrane



2 ARDEX Seam Plates

For fastening of ARDEX TPO membranes

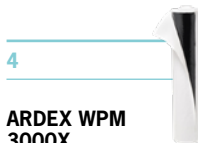
OR 3 ULTRAPLY™ TPO SPRAY ADHESIVE

Sprayable solvent-based contact adhesive



3 ARDEX Polyiso Board

PIR foam insulation board fixed down with nominated fasteners



4 ARDEX WPM 3000X

Self-adhesive bituminous membrane



OR 5 ARDEX WPM 117

Self-Adhesive Bituminous Base Sheet

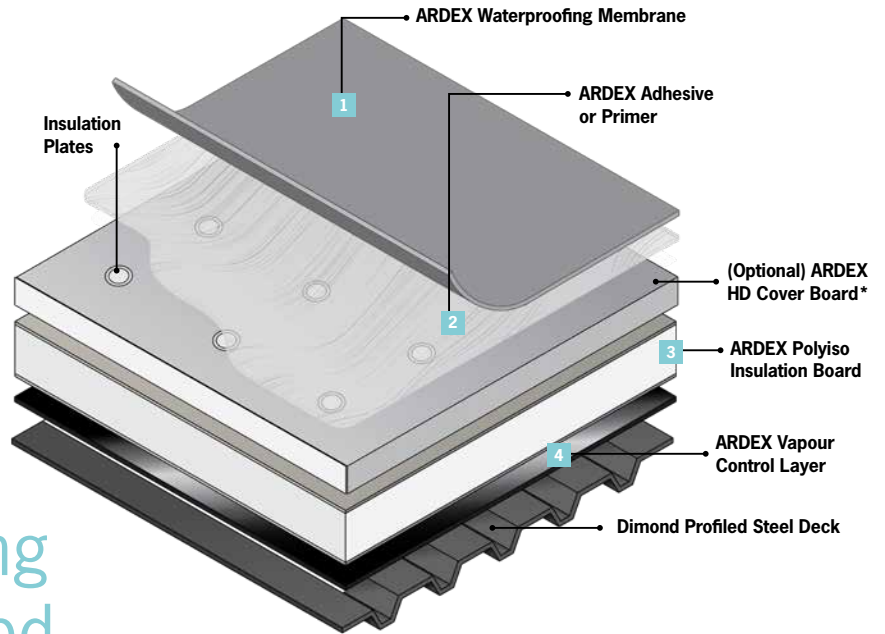
ARCHITECTS, SPECIFIERS AND DESIGNERS

For specification support and project assistance, please contact ARDEX on 0800 227 339, speak to your local ARDEX representative or visit ardex.co.nz

*Optional HD Coverboard does not form part of the BRANZ Appraisal.

WARM ROOF SYSTEM METAL DECK

WeldTec® Roofing
and Torch Applied



Option B WeldTec® WPM 715



ARDEX WPM 715
WeldTec® 1.5mm weldable
waterproofing membrane



ARDEX WA 98
Waterproofing
membrane adhesive



**ULTRAPLY™ TPO
SPRAY ADHESIVE**
Sprayable solvent-based
contact adhesive

ARCHITECTS, SPECIFIERS AND DESIGNERS

For specification support
and project assistance,
please contact ARDEX on
0800 227 339, speak
to your local ARDEX
representative or visit
ardex.co.nz

Option C Torch Applied



ARDEX WPM 189+
Ceramic-coated top layer
bitumen membrane



ARDEX WPM 117
Self-adhesive,
fibre-reinforced
bituminous membrane



**ARDEX
WPM 240**
Solvent-based
bitumen primer



**ARDEX
WPM 247**
Water-based
bitumen primer



**ARDEX
Polyiso Board**
PIR foam insulation
board fixed down with
nominated fasteners



**ARDEX WPM
3000X**
Self-adhesive
bituminous membrane

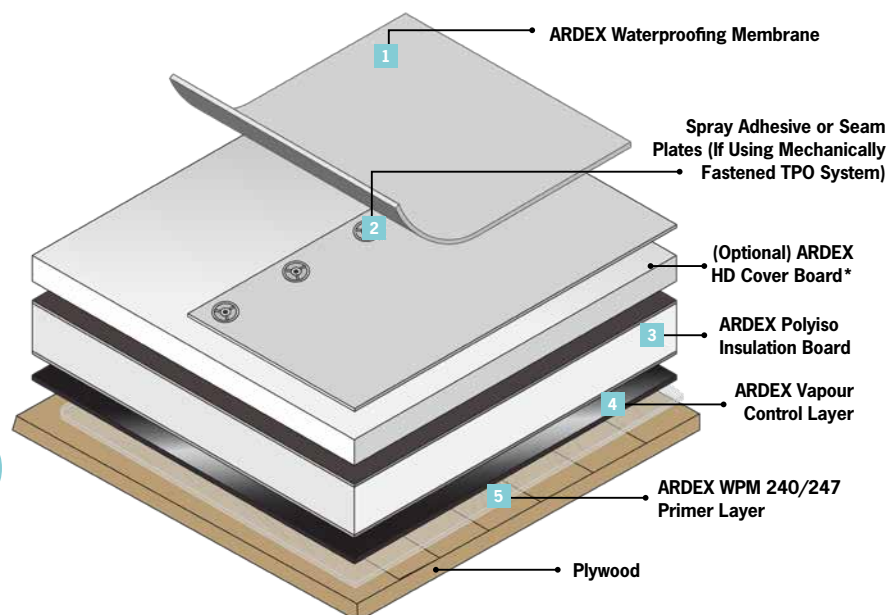


**ARDEX
WPM 117**
Self-Adhesive Bituminous
Base Sheet

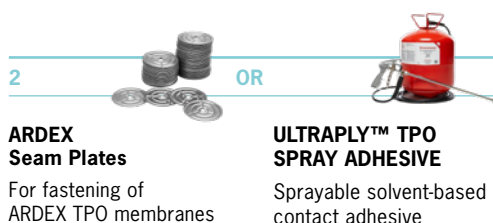
*Optional HD Coverboard does not form part of the BRANZ Appraisal.

WARM ROOF SYSTEM PLYWOOD

ULTRAPLY™ TPO



Option A UltraPly™ TPO



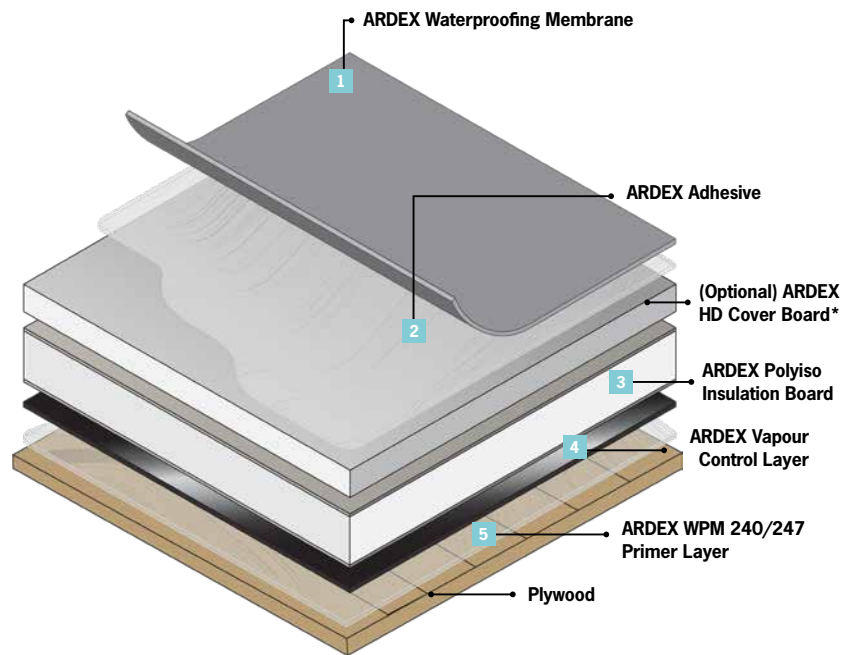
ARCHITECTS, SPECIFIERS AND DESIGNERS

For specification support and project assistance, please contact ARDEX on 0800 227 339, speak to your local ARDEX representative or visit ardex.co.nz

*Optional HD Coverboard does not form part of the BRANZ Appraisal.

WARM ROOF SYSTEM PLYWOOD

WeldTec® Roofing
and Torch Applied



Option B WeldTec® WPM 715



ARDEX WPM 715
WeldTec® 1.5mm weldable
waterproofing membrane



ARDEX WA 98
Waterproofing
membrane adhesive

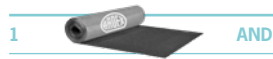


OR
SPRAY ADHESIVE
Sprayable solvent-based
contact adhesive

ARCHITECTS, SPECIFIERS AND DESIGNERS

For specification support
and project assistance,
please contact ARDEX on
0800 227 339, speak
to your local ARDEX
representative or visit
ardex.co.nz

Option C Torch Applied



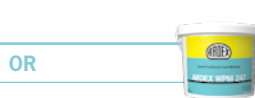
ARDEX WPM 189+
Ceramic-coated top layer
bitumen membrane



AND
ARDEX WPM 117
Self-adhesive,
fibre-reinforced
bituminous membrane



ARDEX WPM 240
Solvent-based
bitumen primer



OR
ARDEX WPM 247
Water-based
bitumen primer



ARDEX Polyiso Board
PIR foam insulation board
fixed down with Polyiso
adhesive or fasteners



ARDEX WPM 3000X
Self-adhesive
bituminous membrane



OR
ARDEX WPM 117
Self-Adhesive Bituminous
Base Sheet



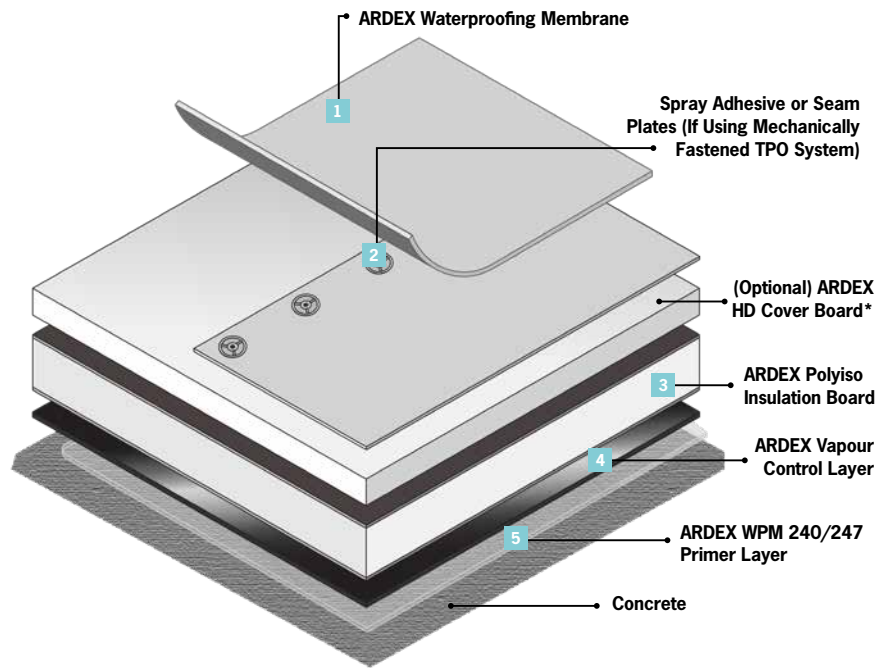
ARDEX WPM 240
Solvent-based
bitumen primer



OR
ARDEX WPM 247
Water-based
bitumen primer

*Optional HD Coverboard does not form part of the BRANZ Appraisal.

WARM ROOF SYSTEM CONCRETE ULTRAPLY™ TPO



Option A UltraPly™ TPO

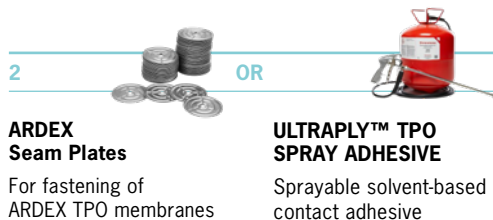


ELEVATE ULTRAPLY™ TPO 1.14mm

1.14mm TPO large-scale
roofing membrane

ELEVATE ULTRAPLY™ TPO 1.5mm

1.5mm TPO large-scale
roofing membrane



ARDEX Seam Plates

For fastening of
ARDEX TPO membranes

ULTRAPLY™ TPO SPRAY ADHESIVE

Sprayable solvent-based
contact adhesive



ARDEX Polyiso Board

PIR foam insulation board
fixed down with Polyiso
adhesive or fasteners

ARDEX WPM 3000X

Self-adhesive
bituminous membrane

ARDEX WPM 117

Self-Adhesive Bituminous
Base Sheet



ARDEX WPM 240

Solvent-based
bitumen primer

ARDEX WPM 247

Water-based
bitumen primer

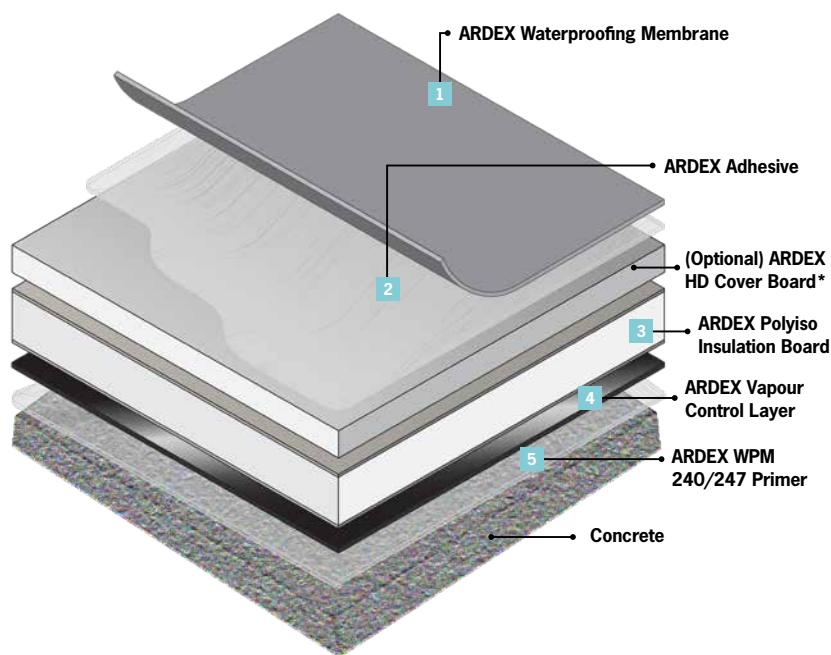
ARCHITECTS, SPECIFIERS AND DESIGNERS

For specification support
and project assistance,
please contact ARDEX on
0800 227 339, speak
to your local ARDEX
representative or visit
ardex.co.nz

*Optional HD Coverboard does not form part of the BRANZ Appraisal.

WARM ROOF SYSTEM CONCRETE

WeldTec® Roofing
and Torch Applied



Option B WeldTec® WPM 715



ARDEX WPM 715

WeldTec® 1.5mm weldable waterproofing membrane



ARDEX WA 98

Waterproofing membrane adhesive



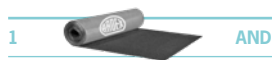
OR SPRAY ADHESIVE

Sprayable solvent-based contact adhesive

ARCHITECTS, SPECIFIERS AND DESIGNERS

For specification support and project assistance, please contact ARDEX on 0800 227 339, speak to your local ARDEX representative or visit ardex.co.nz

Option C Torch Applied



1 ARDEX WPM 189+

Ceramic-coated top layer bitumen membrane

AND



ARDEX WPM 117

Self-adhesive, fibre-reinforced bituminous membrane



2 ARDEX WPM 240

Solvent-based bitumen primer

OR



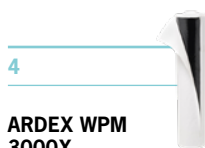
ARDEX WPM 247

Water-based bitumen primer



3 ARDEX Polyiso Board

PIR foam insulation board fixed down with Polyiso adhesive or fasteners



4 ARDEX WPM 3000X

Self-adhesive bituminous membrane

OR



ARDEX WPM 117

Self-Adhesive Bituminous Base Sheet



5 ARDEX WPM 240

Solvent-based bitumen primer

OR



ARDEX WPM 247

Water-based bitumen primer

*Optional HD Coverboard does not form part of the BRANZ Appraisal.



0800 227 339

ardex.co.nz

November 2024