

# ULTIM8<sup>®</sup> PANELITE

THE PREMIUM EXTERIOR PANEL  
TECHNICAL INFORMATION PACK.



# PANELITE TECHNICAL DATA SHEET

## FEATURES AND BENEFITS

PANELITE® is a highly durable substrate that provides enhanced machinability and dimensional stability. Suitable for surface decoration, Panelite delivers extended design flexibility, potential and application possibilities through next generation ULTIM8® Composite Technology. Panelite is a suitable substrate for a variety of wet area and exterior applications. These innovative properties provide product manufacturers, fabricators, designers, architects and builders with versatile and economical building panel solutions. Perfect for projects where durability, stability and versatility is desired. Panelite requires no additional treatment to protect it from decay or dimensional instability.



### DURABILITY

Longer lasting, perfect for outdoor use or wet (interior and exterior) environments.



### DIMENSIONAL STABILITY

Minimal swelling and shrinkage



### 10 / 7 YEAR WARRANTY

Peace of mind with a 10 year Limited Warranty for interior applications and 7 Year Limited Warranty for exterior applications. \*Terms & conditions apply.



### DESIGN FLEXIBILITY

The benefits of high grade fibreboard with enhanced durability and performance



### MULTIPLE SURFACE OPTIONS

Perfect substrate for decoration with foils, laminates and veneers using quality PUR adhesives for Interior and Exterior applications



### LESS MAINTENANCE GREATER SAVINGS

Extended periods between panel maintenance requirements or replacement



### MOULD AND MILDEW RESISTANCE

Resistant to fungal decay



### NO ADDED FORMALDAHYED

Panelite contains No Added Formaldehyde

## PRODUCT AVAILABILITY

Panelite is produced in the following standard panel sizes:

16mm: 2440mmx1220mm, 3050mmx1220mm

18mm: 2440mmx1220mm, 3050mmx1220mm

Other thicknesses and panel dimensions may be produced to order upon request. MOQs apply for these requests.

# PANELITE TECHNICAL DATA SHEET

## TECHNICAL SPECIFICATION

Assessed in Accordance with AS/NZS 1859.2 required Test Methods.

### SPECIFICATION SHEET

| Property                               | Test Method  | Units | THICKNESS (MM)                 |           |
|--|--------------|-------|--------------------------------|-----------|
|  |              |       | 16mm (Typical Results Average) |           |
| Density                                | AS 4266.4    | kg/m3 | 600 +/- 30                     |           |
| Internal Bond                          | AS 4266.6    | MPa   | 3.37                           |           |
| Modulus of Rupture                     | AS 4266.5    | MPa   | 15.5                           |           |
| Modulus of Elasticity                  | AS 4266.5    | MPa   | 1180                           |           |
| Screw Holding Face                     | AS 4266.13   | N     | 450                            |           |
| Screw Holding Edge                     | AS 4266.13   | N     | 210N                           |           |
| Thickness Swell (24hrs)                | AS 4266.8    | %     | 0.0%                           |           |
| Dimensional Movement                   |              |       | 30-85% RH                      | 85-30% RH |
|  |              |       |                                |           |
| Length / Width                         | AS 4266.14   | mm/m  |                                |           |
| - Transverse                           |              |       | 0.7                            | 0.0       |
| - Longitudinal                         |              |       | 0.5                            | 0.0       |
| Thickness                              | AS 4266.14   | %     |                                |           |
| - Transverse                           |              |       | 0.0%                           | -0.2%     |
| - Longitudinal                         |              |       | 0.0%                           | -0.1%     |
| Linear Thermal Expansion (Coefficient) | ASTM D696-16 |       | 35.235 x 10 <sup>-6</sup> /°C  |           |

# PANELITE TECHNICAL DATA SHEET

## TECHNICAL APPLICATION GUIDELINES

### PANEL STORAGE FOR INSTALLATION

It is recommended that Panelite panels be stored and installed with adequate air flow available to both faces of the panels. This will help to ensure that equilibration to the required storage or installation environment for both faces of the panels can be achieved to maintain optimum panel stability.

### MACHINING & FINISHING

Panelite may be cut, machined and using similar tools and techniques as for other timber-based panels to deliver clean cut edges and profiled faces. Panelite is delivered with a 120 grit sanded finish as standard. It may be sanded to achieve smoother or deeper textured surfaces as desired, using suitable sanding grit papers.

### PANELITE SURFACE DECORATION

Panelite may be decorated with foils, high pressure laminates, wood veneers and other surfacing materials. Quality adhesives such as PUR (polyurethane reactive) may be used. Please follow instructions or seek support from adhesive product suppliers for guidelines on application and suitability for the intended surface decoration materials.

Panelite may also be decorated using suitable coating systems. Please see the coating manufacturers guidelines for recommendations and warranties to ensure correct procedures for surface coating and sealing of Panelite products are followed.

## CARE AND MAINTENANCE

ULTIM8 Panelite is more resilient and requires less maintenance compared to timber-based panels. This guide will provide you with the basic principles for care and maintenance of these panels to help maintain the performance of your Panelite.

### STANDARD CLEANING PROCESS

ULTIM8 Panelite is designed to be used as a substrate for decorative surfaces and finishes to be applied. Non-porous decorative surfaces or finishes are typically cleaned using warm water mixed with a mild detergent or non-bleach based cleaner. These should be applied and wiped clean using a microfibre cloth to ensure no damage occurs to the surface layer. Do not use abrasive or corrosive cleaning agents or cleaning materials. Always ensure that the Care and Maintenance guidelines of the surfacing material manufacturer are followed to ensure that warranty conditions are not voided.

# PANELITE TECHNICAL DATA SHEET

## SEMI-EXTERIOR AND EXTERIOR APPLICATIONS

ULTIM8 Panelite is a suitable substrate for semi-exterior and fully exterior applications such as alfresco and BBQ area cabinetry and panelling, pool areas, wall panelling and decorative screens. It must be ensured that all faces and edges of the Panelite panel are decorated with an exterior-rated surfacing material that can withstand direct UV and weathering effects when using for such applications. Please ensure that the product suitability and application guidelines of the surfacing material manufacturer are followed to ensure that warranty conditions are not voided. It is important that all faces and edges of the Panelite are covered with an exterior-rated and warranted surfacing material, as failure to do so will lead to voiding of the Panelite product warranty.

## GUIDELINES TO EXPOSURE OF CONSTANT WETTING

While Panelite has been designed to handle high humidity and frequent wetting environments, it is not recommended that Panelite panels remain fully submerged in water. Any submersion of Panelite panels should be limited to a maximum continual time span of 12 hours, with adequate time allowed for the panel to dry before any subsequent submersion.

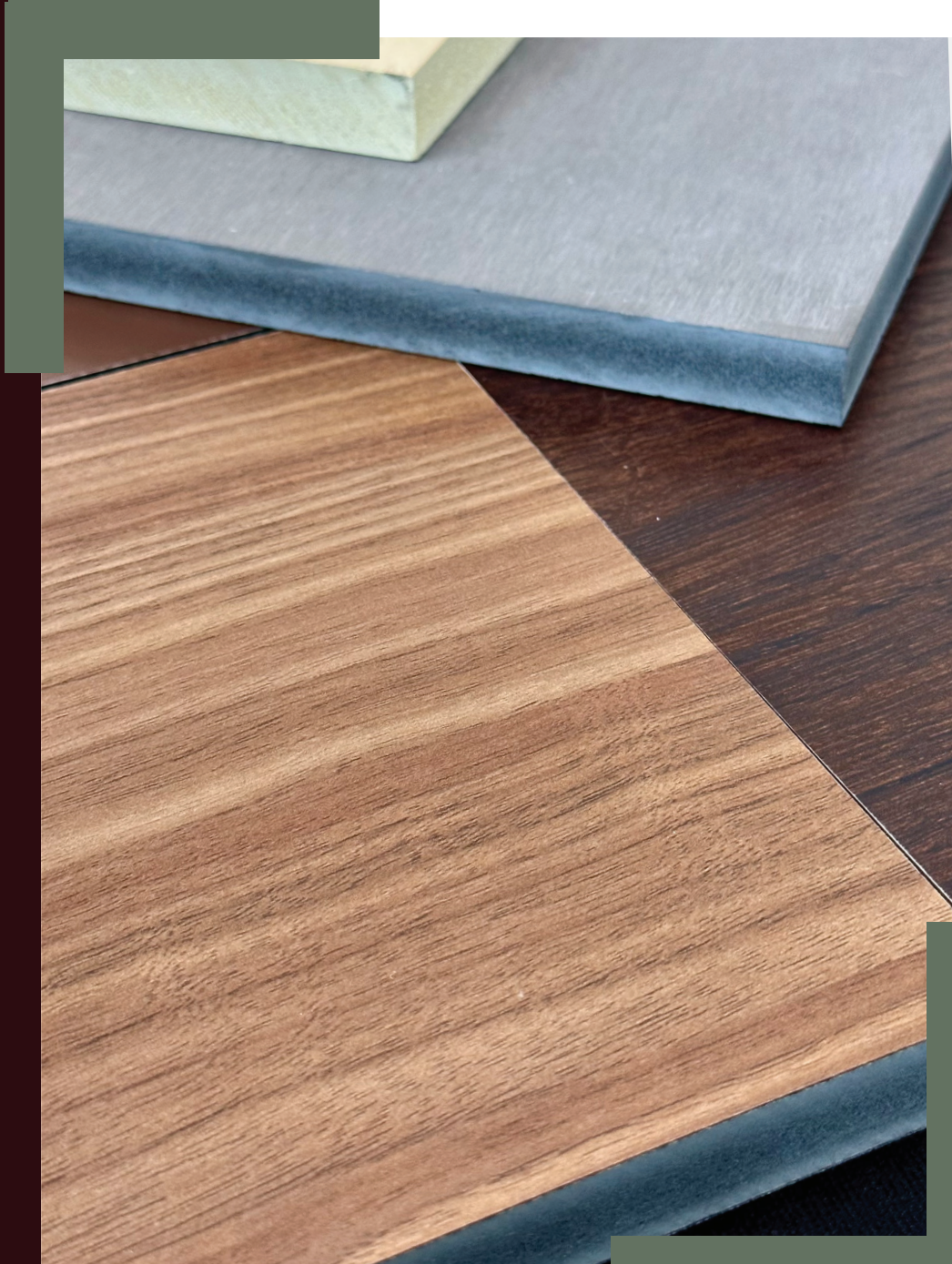
## LIMITED WARRANTY

ULTIM8 Panelite products carry a Manufacturers Limited Warranty against manufacturing faults and defects. Please refer to the Manufacturers Limited Warranty document contained within this Technical Information Pack..



# ULTIM8<sup>®</sup> PANELITE

THE PREMIUM EXTERIOR PANEL  
**STORAGE AND HANDLING GUIDE**



# PANELITE TECHNICAL DATA SHEET

## STORAGE AND HANDLING GUIDE

### LOADING AND UNLOADING CONTAINERS

Loading and unloading containers must be done in accordance with the ULTIM8 PANELITE Container Loading instructions.

### OPENING PACKS

Care must be taken when cutting straps to open ULTIM8 PANELITE packs. Packs must be flat and level on the ground before any straps are cut. Packs must not be moved if any straps have been removed or are broken. Missing straps must be replaced prior to moving packs.

Ensure carton cutter blades or Stanley knife blades do not contact the ULTIM8 PANELITE, which may cause damage to the boards.

### STORAGE

ULTIM8 PANELITE boards:

- MUST be supported at least every 600mm on a level surface, including supports at both ends
- MUST be laid flat for storage, and never at an angle
- MUST be stored in dry conditions, at least 100mm off the ground
- MUST remain covered until it is time to use them for installation
- MUST NOT be stacked more than 4 pallets high, and then only where safe to do so
- MUST only be stored on racks with appropriate load ratings

### TRANSPORT

ULTIM8 PANELITE boards:

- MUST be protected by top and bottom cover sheets on every pack
- MUST be laid flat during transport, and never at an angle
- MUST always be appropriately strapped and secured during transportation
- MUST never dropped or 'dumped' when unloading
- MUST not be dragged along the ground when loading, unloading, or carrying, as it may result in damage
- MUST remain covered until it is time to be used for installation

### HANDLING

Always exercise caution and care when lifting, and always check the weight on the label before attempting to lift an ULTIM8 PANELITE board. Individual ULTIM8 PANELITE boards should always be carried by at least 2 people, wherever safe to do so. All relevant OH&S policies and practices should be observed.



# ULTIM8<sup>®</sup> PANELITE

THE PREMIUM EXTERIOR PANEL  
FABRICATION AND  
INSTALLATION GUIDE.





## **Fabrication and Installation Guide**

### **FABRICATION AND INSTALLATION GUIDE**

ULTIM8® PANELITE is quick and easy to fabricate and install. Please take the time to read the following guide to ensure performance of your product, before you begin fabricating and installing the Panelite materials.

### **IMPORTANT INFORMATION**

We recommend the use of protective clothing and safety equipment as recommended by your local, state or federal regulations. Wearing equipment to protect eyes, nose and mouth from dust particles such as safety glasses, gloves, a dust mask and long sleeves is especially important when cutting and drilling is highly recommended.

ULTIM8 PANELITE boards are approximately the same weight as timber-based panels. Always exercise caution and care when lifting ULTIM8 PANELITE boards. We recommend that ULTIM8 PANELITE boards be safely handled by two people at any given time to follow safe working guidelines and avoid the possibility of injuries. The homeowner, contractor or installer is responsible for determining the specific requirements, effectiveness, suitability and safety in regards to any application or use of ULTIM8 PANELITE products. ULTIM8 PANELITE products must be installed correctly, ensuring compliance with all the relevant regulations and aspects of the Building Code of Australia, as well as relevant Australian Standards.

Proper ventilation and air circulation around the ULTIM8 PANELITE is necessary to facilitate the equilibration of the panels. Slight colour variation of ULTIM8 PANELITE boards will occur in the same way natural timber does. The equilibrating process for ULTIM8 PANELITE products will vary according to exposure to different climates, sunlight and moisture.

### **ULTIM8 PANELITE SHOULD NOT:**

- Be used in exterior applications without a suitable exterior surfacing material being applied.
- Be surfaced with any non-warranted surfaces when used for exterior applications. Any surfacing materials used for exterior applications must be warranted by the surfacing material supplier against the effects of UV and weathering as per their usage guidelines.
- Be used in applications for dwellings or buildings of more than two levels (i.e. ground floor and first floor) as noted within Class 1a and Class 2 Buildings in the National Construction Code.

### **DECORATION OF PANELITE**

ULTIM8 Panelite is designed to be used as a substrate for decorative surfaces and finishes to be applied. When decorating with foils, films or laminates, please ensure that the decorative surface and the adhesive layer used are fit for purpose and suitable for the intended application. We strongly recommend the use of similar adhesive system and ecoactive materials on both faces of the Panelite, to ensure panel stability. This needs to be warranted by the relevant surfacing or adhesive supplier company technical guidelines.

When coating or sealing Panelite, again please ensure that your chosen system is fit for the purpose intended. This should include the review of a test piece of Panelite that has been coated with the chosen coating or sealing system as recommended by the system supplier. For coating and sealing system recommendations, please contact MCX Materials.

### **CUTTING AND MACHINING**

We recommend the use of blades and router bits that are suitable for cutting and machining plastic composite materials. Please consult a tools and blades supply specialist for advice.

## **INSTALLING AND FASTENING ULTIM8 PANELITE**

Panelite boards will expand and contract with changes in temperature as with all natural or plastic products in certain environments more than others. The ideal temperature condition for installing ULTIM8 PANELITE is around 24°C. We recommend you store the Panelite boards in the installation environment for at least 48 hours before fabrication and installation, to allow the panels to equilibrate.

Avoid drilling or screwing any closer than 8mm centres from the edge of the face of a Panelite board using an appropriate wood panel screw.

## **STORAGE AND HANDLING**

ULTIM8 PANELITE boards must be:

- Supported at least every 600mm on a level surface
- Laid flat during storage or transportation and never at an angle
- Must not be dropped or 'dumped' when unloading or carrying to site
- Stored on a flat, dry surface and at least 100mm off the ground
- Remain covered until time of installation.

For detailed care and maintenance information, refer to the ULTIM8 PANELITE Care and Maintenance Guide available within this Technical Information Pack.

All information contained in this document was correct and current at the time of publishing and is subject to change. Visit the website for more information on gaps, spans and fixing specifications.

# ULTIM8<sup>®</sup> PANELITE

THE PREMIUM EXTERIOR PANEL  
SUMMARY OF TEST RESULTS





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Co-efficient of Linear Expansion

RoHS Chemical Detection Test Results

# PANELITE TEST RESULTS SUMMARY

## Executive Summary of Testing Results – 16mm Panelite

| Test Item                            | Test Method  |                              | Result  |
|--------------------------------------|--------------|------------------------------|---|
| Density                              | AS 4266.4    |                              | 600 +/- 30 kg/m <sup>3</sup>                              |
| Internal Bond Strength               | AS 4266.6    |                              | 3.37 MPa  |
| Modulus of Rupture (MOR)             | AS 4266.5    |                              | 15.5 MPa  |
| Modulus of Elasticity (MOE)          |              |                              | 1180 MPa  |
| Screw Holding - Face                 | 4266.13      |                              | 450 N   |
| Screw Holding - Edge                 |              |                              | 210 N   |
|                                      |              |                              |   |
| Thickness Swell (24 Hrs)             |              |                              | 0.0 %   |
| Dimensional Stability – Length/Width | AS 4266.14   | Transverse:<br>Longitudinal: | 30-85% RH / 85-30% RH<br>0.7 / 0.0 mm/m<br>0.5 / 0.0 mm/m |
| Dimensional Stability - Thickness    |              | Transverse:<br>Longitudinal: | 30-85% RH / 85-30% RH<br>0.0 / -0.2 %<br>0.0 / -0.1 %     |
| Co-Efficient of Linear Expansion     | ASTM D696-16 |                              | 35.235 x 10 <sup>-6</sup> / °C                            |
|                                      |              |                              |   |

# PANELITE TEST RESULTS SUMMARY

## Detailed Testing Results

### Co-Efficient of Linear Expansion

In accordance with the test requirements to advise the Co-Efficient of Linear Thermal Expansion that could be applied to an installed application where the result can be applied as potential expansion measured in mm/(mm degree C).

### Test Method:

1. With reference to Test Method ASTM D696-16, with a testing temperature range of -30 degrees C to 50 degrees C.

### Results:

Test results as provided by SGS in Test Report No.: SHIN2309001450CM01\_EN

| Test Item(s)                             | Test Method  | Test Results  |
|--|--------------|---|
| Co-Efficient of Linear Thermal Expansion | ASTM D696-16 | Mean value: 35.235 x 10 <sup>-6</sup> mm/(mm.degrees C) |



# PANELITE TEST RESULTS SUMMARY

## TEST REPORT

No. : SHIN2309001450CM01\_EN

Date : 2023-09-28

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### 1. Test Item: RoHS

Test Part Description: White solid plate

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-8:2015 and IEC 62321-8:2017, analysis was performed by ICP-OES, UV-Vis and GC-MS.

Test Result:

| Test Item(s)                     | Limit | Unit(s) | MDL | Test Result |
|----------------------------------|-------|---------|-----|-------------|
| Cadmium(Cd)                      | 100   | mg/kg   | 2   | ND          |
| Lead (Pb)                        | 1000  | mg/kg   | 2   | 470         |
| Mercury (Hg)                     | 1000  | mg/kg   | 2   | ND          |
| Hexavalent Chromium (Cr(VI))     | 1000  | mg/kg   | 8   | ND          |
| Polybromobiphenyl (PBBs)         | 1000  | mg/kg   | -   | ND          |
| Monobromobiphenyl (MonoBB)       | -     | mg/kg   | 5   | ND          |
| Dibromobiphenyl (DiBB)           | -     | mg/kg   | 5   | ND          |
| Tribromobiphenyl (TriBB)         | -     | mg/kg   | 5   | ND          |
| Tetrabromobiphenyl (TetraBB)     | -     | mg/kg   | 5   | ND          |
| Pentabromobiphenyl (PentaBB)     | -     | mg/kg   | 5   | ND          |
| Hexabromobiphenyl (HexaBB)       | -     | mg/kg   | 5   | ND          |
| Heptabromobiphenyl (HeptaBB)     | -     | mg/kg   | 5   | ND          |
| Octabromobiphenyl (OctaBB)       | -     | mg/kg   | 5   | ND          |
| Nonabromobiphenyl (NonaBB)       | -     | mg/kg   | 5   | ND          |
| Decabromobiphenyl (DecaBB)       | -     | mg/kg   | 5   | ND          |
| Polybromodiphenyl ether(PBDEs)   | 1000  | mg/kg   | -   | ND          |
| Monobromodiphenylether (MonoBDE) | -     | mg/kg   | 5   | ND          |
| Dibromodiphenylether (DiBDE)     | -     | mg/kg   | 5   | ND          |
| Tribromodiphenylether (TriBDE)   | -     | mg/kg   | 5   | ND          |

# PANELITE TEST RESULTS SUMMARY

## TEST REPORT

No. : SHIN2309001450CM01\_EN

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| Test Item(s)                       | Limit | Unit(s) | MDL | Test Result |
|------------------------------------|-------|---------|-----|-------------|
| Tetrabromodiphenylether (TetraBDE) | -     | mg/kg   | 5   | ND          |
| Pentabromodiphenylether (PentaBDE) | -     | mg/kg   | 5   | ND          |
| Hexabromodiphenylether (HexaBDE)   | -     | mg/kg   | 5   | ND          |
| Heptabromodiphenylether (HeptaBDE) | -     | mg/kg   | 5   | ND          |
| Octabromodiphenylether (OctaBDE)   | -     | mg/kg   | 5   | ND          |
| Nonabromodiphenylether (NonaBDE)   | -     | mg/kg   | 5   | ND          |
| Decabromodiphenylether (DecaBDE)   | -     | mg/kg   | 5   | ND          |
| Dibutyl Phthalate(DBP)             | 1000  | mg/kg   | 50  | ND          |
| Benzyl Butyl Phthalate(BBP)        | 1000  | mg/kg   | 50  | ND          |
| Bis-(2-ethylhexyl) Phthalate(DEHP) | 1000  | mg/kg   | 50  | ND          |
| Diisobutyl Phthalate(DIBP)         | 1000  | mg/kg   | 50  | ND          |

### Remarks:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

### Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series.
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019.

# ULTIM8<sup>®</sup> PANELITE

THE PREMIUM EXTERIOR PANEL  
MANUFACTURERS LIMITED  
WARRANTY





# **Manufacturer's Limited Warranty**

(Warranty Against Defects)

## **DEFINITIONS**

"Purchaser" means any end user of the Products who purchased the Products for Residential Purposes.

"Product" means the product to which this Manufacturer's Warranty is attached. "Term" means the period of time stated on the label or packaging for that particular Product from the date of purchase from MCX or any Authorised Distributor. "Residential Purposes" means installation and use of the Product at residential premises in Australia.

Please refer to the following details regarding MCX Group Pty Ltd ("MCX") warranty against defects. Subject to this warranty and the Warranty Claim Procedure, MCX warrants this product to be free of manufacturing or material defect for a term of ten (10) years for interior applications and seven (7) years for exterior applications with a warranted exterior surface applied, from the time of purchase. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits of this warranty are in addition to any rights and remedies available under Australian State and Federal legislation that cannot be excluded. Nothing in this warranty is to be interpreted as excluding, restricting or modifying any State or Federal legislation applicable to the supply of goods and services, which cannot be excluded, restricted or modified.

## **WARRANTY**

1. MCX will replace any defective product free of charge in the event that:
  - a. The product is used for Residential Purposes\* only (\*for warranted Commercial Purposes, please contact [info@mcxmaterials.com](mailto:info@mcxmaterials.com)), and;
  - b. The defect does not arise from:
    - i. Improper installation, maintenance or handling of the product and/or failure to abide by the MCX installation or maintenance guidelines, including but not limited to improper gapping;
    - ii. Use of the product contrary to local building regulations;
    - iii. Any act of God (including flooding, earthquake, lightning and any other naturally occurring environmental or other disaster);
    - iv. Staining from foreign substances (including dirt, grease, oil and any other substance);
    - v. Normal expected exposure to natural elements, including but not limited to mildew or mould;
    - vi. Gradual discolouration (including, but not limited to, fading and staining);
    - vii. Ordinary wear and tear;
    - viii. Minor splits or cracking around screws
2. Where a defect in a product arises due to mould or mildew, the term of the warranty will be limited to five (5) years irrespective of any previous warranty, but not excluding any warranty under the Australian Consumer Law.
3. This warranty is not transferable; it applies only to the consumer that purchased the product from the retailer or manufacturer ("Purchaser").
4. MCX reserves the right to replace defective parts of the product with parts and components of similar quality, grade and composition where an identical part or component is not available.

## WARRANTY CLAIM

PROCEDURE - In order to claim a warranty on any of MCX's products you must follow the procedure outlined below:

5. Send written notification to the place of purchase within 30 days from the discovery of the alleged defect, including the following details:
  - a. A clear description of the alleged defect;
  - b. Photographs of the alleged defect;
  - c. Quantity claimed to be defective;
  - d. Proof of original receipt (or other evidence displaying the date of purchase which MCX is reasonably satisfied with).
6. Upon receipt of this information MCX will work with the purchaser or the distributor to investigate the claim. Any and all investigations will seek to establish the cause of the claim in a timely manner.
7. At any time in the investigation MCX may request the assistance of engineers, scientists or any other party MCX deems appropriate to verify the claim. If the claim is proven, MCX, at its discretion will repair or replace the product on a case-by-case basis or alternatively provide a refund for the quantity found to be defective.

## WARRANTY EXCLUSIONS

8. This warranty against manufacturing defects does not extend to cover:
  - a. Costs associated to remove the defective product from the purchases premises or the location of the product;
  - b. Any charges incurred by the Purchaser in returning any defective product to MCX or in notifying MCX of the alleged defective product;
  - c. Costs associated to installing any replacement product;
  - d. Costs associated with making a warranty claim, including costs such as postage and handling;
  - e. Any other reasonably foreseeable costs incurred,
  - f. Any changes in colour or appearance of the product due to climatic effects.
9. ULTIM8 Panelite is made by combining wood fibres and plastic materials. Whilst every care is taken to ensure consistency, natural and immaterial variances may occur from one board to the other in appearance and performance. Natural and immaterial variances are not a fault of the product and, accordingly, no warranty is provided in respect of any such variation.
10. MCX or any of its affiliated employees or agents will not be liable for any special, indirect or consequential loss or damage arising out of the use of, or handling of any MCX product whatsoever, including any special, indirect or consequential loss or damage suffered as a result of the negligence of MCX, except those which cannot be excluded under the Australian Consumer Law or applicable State, Territory or Federal laws.

### Contact MCX Group Pty Ltd:

18/3 Westside Avenue, Port Melbourne, Victoria, Australia, 3207

Phone: +61 3 9982 4456

Email: [info@mcxmaterials.com](mailto:info@mcxmaterials.com)