

ULTIM8[®] CLADDEX[™]

MULTI PURPOSE WET AREA

LINING AND CLADDING

TECHNICAL INFORMATION PACK



**Durable
Exterior
UV Rated**

**Lightweight
Panel**

**Easy to
Fabricate
and
Install**

**Low
Maintenance**

info@ultim8materials.com
www.ultim8materials.com

ULTIM8[®] CLADDEX[™]

ULTIM8 CLADDEX is a highly durable, water proof substrate that provides enhanced machinability and dimensional stability. Suitable to use in its natural state or for surface decoration, ULTIM8 CLADDEX delivers extended design flexibility and application possibilities through advanced proprietary ULTIM8 Composite Technologies. ULTIM8 CLADDEX is a suitable substrate for a variety of wet area and exterior applications, particularly where high performance capabilities are required. These innovative properties provide product manufacturers, fabricators, designers, architects and builders with versatile and economical building panel solutions. Perfect for projects where extreme durability, stability, high level water resistance is desired. ULTIM8 CLADDEX requires no additional treatment to protect it from decay or dimensional instability.



FEATURES AND BENEFITS

✓ DURABLE, EXTERIOR AND WATER RESISTANT

Longer lasting, perfect for outdoor use or wet (interior and exterior) environments. Suitable for where high water resistance is required.

✓ DIMENSIONAL STABILITY

Minimal swelling, splintering, shrinkage or cracking.

✓ 10 YEAR LIMITED WARRANTY*

Peace of mind. 10 Year Limited Product Warranty*, for interior and exterior installations.

✓ COST EFFECTIVE

A cost effective light weight alternative for exterior wall lining and cladding.

✓ MULTIPLE SURFACING AND PROFILE OPTIONS

Perfect substrate for surface value adding through profiling or exterior decorative surfacing.

✓ LESS MAINTENANCE GREATER SAVINGS

Extended periods between panel maintenance requirements or replacements.

✓ INSECT, MOULD AND MILDEW RESISTANT

Resistant to fungal, algae or mould decay.

✓ NO ADDED FORMALDEHYDE

Contains no added formaldehyde.

✓ EASE OF MANUFACTURE AND PROCESSING

Simple and effective properties allowing ease of cutting and profiling with clean cutting lines.

✓ SUITABLE FOR IN GROUND USE

Can be installed partially in ground in non caustic environments.

✓ RECYCLABLE

Can be recycled, using facilities with appropriate technology.

✓ USE STANDARD TOOLS AND FIXINGS

Use standard woodworking tools to cut, drill and router. Fix using standard composite or wood screws.

CLADDEXTM PANELS TECHNICAL DATA

Raw Panel Specifications:

PANEL SIZE	THICKNESS*	WEIGHT (Kg per M2)				WEIGHT (Kg per Panel)			
(mm)	Nominal (mm)	6mm	8mm	10mm	12mm	6mm	8mm	10mm	12mm
2400x1200	6, 8, 10, 12	4.50	6.00	7.50	9.00	12.96	17.28	21.60	25.92
3000x1200	6, 8, 10,12	4.50	6.00	7.50	9.00	16.20	21.60	27.00	32.40

* Other thicknesses available upon request. MOQ's apply.

General Tolerances and Specifications:

Length	+ - 1mm
Width	+ - 1mm
Thickness	+ - 0.2 mm
Diagonal	+ - 1mm
Density	750 kg/m3

Dimensional Stability (AS/NZ 4266.1 S16)

Transverse:	
Humidity Increase: (30% RH To 85% RH)	+0.3% (0.2mm)
Humidity Decrease: (85% RH To 30% RH)	0.0% (0.0mm)
Nett Dimensional Change:	+0.3% (0.2mm)
Longitudinal:	
Humidity Increase: (30% RH To 85% RH)	+0.1% (0.2mm)
Humidity Decrease: (85% RH To 30% RH)	- 0.1% (- 0.1mm)
Nett Dimensional Change:	+0.0% (0.1mm)

Substrate Properties:

Modulus of Elasticity (MOE) (AS/NZS 4266.1 S7)	1280 MPa
Modulus of Rupture (MOR) (AS/NZS 4266.1 S7)	16.8 MPa
Internal Bond (AS/NZS 4266.1 S8)	1.27 MPa
Thickness Swell (AS/NZS 4266.1 S10)	0.20 %
Face Screw Withdrawal (AS/NZS 4266.1.58 S15)	567 N
Linear Thermal Expansion (ASTM D696-16)	35.5×10^{-6} mm /(mm.°C) (Tested from -30° C to +30°C)
UV Testing (ASTM G155, ASTM D2244 and AATCC EP 7)	Grey Scale 3 - 3.5 (Colour slightly darker after testing)



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STORAGE AND HANDLING GUIDE

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STORAGE AND HANDLING GUIDE

LOADING AND UNLOADING CONTAINERS

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

OPENING PACKS

Care must be taken when cutting straps to open ULTIM8 CLADDEX 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 CLADDEX, which may cause damage to the boards.

PANEL STORAGE

It is recommended that ULTIM8 CLADDEX 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.

ULTIM8 CLADDEX 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 CLADDEX 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 CLADDEX board. Individual ULTIM8 CLADDEX 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.

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FABRICATION AND INSTALLATION GUIDELINES

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FABRICATION AND INSTALLATION GUIDELINES

ULTIM8® CLADDEX 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 CLADDEX Panel materials.

MACHINING AND FINISHING

ULTIM8 CLADDEX inspires you to design smarter and create faster.

ULTIM8 CLADDEX is as easy to fabricate as conventional wood panels.

You can cut, machine, nail, screw and drill with ease. ULTIM8 CLADDEX may be cut, machined and used in exactly the same way as other timber-based panels to deliver clean cut edges and profiled faces.

The ULTIM8 Composite Core enables good screw and nail holding. Choose fasteners that are counter sunk with a wide head and fully threaded. Gluing the edge adds to the strength of the joinery. Stainless steel screws are ideal for outdoor applications

ULTIM8 CLADDEX 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.

IMPORTANT SAFETY 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 CLADDEX boards are approximately the same weight as timber-based panels.

Always exercise caution and care when lifting ULTIM8 CLADDEX boards. We recommend that ULTIM8 CLADDEX 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 CLADDEX products. ULTIM8 CLADDEX products must be installed correctly, ensuring compliance with all the relevant regulations and aspects of the National Construction Code, as well as relevant Australian Standards. (Countries outside of Australia please refer to your relevant National Building Codes and Standards).

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

ULTIM8 CLADDEX SHOULD NOT:

- 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 without appropriate approvals granted by relevant authorities.

DECORATION OF CLADDEX

ULTIM8 CLADDEX is designed to be used as a substrate for decorative surfaces and finishes to be applied. CLADDEX may be decorated with foils, high pressure laminates, acrylic sheet 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.

When decorating 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 decorative materials on both faces of the CLADDEX, to ensure panel stability. This needs to be warranted by the relevant surfacing or adhesive supplier company technical guidelines.

ULTIM8 CLADDEX may also be decorated using approved coating systems. Please see the coating manufacturers guidelines and warranties to ensure correct procedures for surface coating and sealing of CLADDEX products are followed. When coating or sealing CLADDEX, again please ensure that your chosen system is fit for the purpose intended. This should include the review of a test piece of CLADDEX 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 CLADDEX

ULTIM8 CLADDEX boards may 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 CLADDEX is around 20°C. We recommend you store the CLADDEX 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 CLADDEX board using an appropriate wood panel screw.

STORAGE AND HANDLING

ULTIM8 CLADDEX 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 CLADDEX 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.

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CARE AND MAINTENANCE

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CARE AND MAINTENANCE

CARE AND MAINTENANCE

ULTIM8 CLADDEX 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 ULTIM8 CLADDEX panels.

STANDARD CLEANING PROCESS

ULTIM8 CLADDEX is designed to be used as a substrate in its natural state or for decorative surfaces and finishes to be applied. The natural non-decorated CLADDEX and any non-porous decorative surfaces or finishes are typically cleaned using warm water mixed with a mild detergent or non-bleach based cleaner. For exterior applications, this can include a high pressure cleaner in broad spray mode or a manual brushing technique. For interior applications, decorated surfaces should be 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.

SEMI-EXTERIOR AND EXTERIOR APPLICATIONS

ULTIM8 CLADDEX 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. If face decorating, it must be ensured that all faces and edges of the CLADDEX panel are fully sealed or 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.

GUIDELINES TO EXPOSURE OF CONSTANT WETTING

While ULTIM8 CLADDEX has been designed to handle high humidity and constant wetting environments, it is not recommended that CLADDEX panels remain fully submerged in water. Any submersion of CLADDEX 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.

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MULTI PURPOSE WET AREA LINING AND CLADDING TECHNICAL INFORMATION PACK



MANUFACTURERS LIMITED WARRANTY

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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 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), 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 ten (10) 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 CLADDEX panels are made by combining agricultural residue 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:

Level 2, 1 Southbank Boulevard, Southbank, Victoria, Australia, 3006
Phone: +61 3 9982 4456 or info@ultim8materials.com

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SAFETY DATA SHEET

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SAFETY DATA SHEET

Trade Name : ULTIM8[®] CLADDEX[™]

1. Identification of the Company/Undertaking with full address

MCX Group Pty Ltd
Level 2, 1 Southbank Blvd
Southbank,
Victoria, Australia, 3006.

2. IDENTIFICATION OF COMPOSITION

Composite material made by using Propriety Formualtion of PVC (Poly Vinyl Chloride) up to 70%, Wood Flour up to 10% processing additives other ingredients up to 25%

- anti mould agent
- coupling agent
- anti uv agent
- colour pigment

3. HAZARDS IDENTIFICATION

No Known Hazards

4. FIRST AID MEASURES

- Medical Aid : not necessary
- Routes of exposure : in case of sawing, if the dust particles hit the eyes, wash eyes with water
- Symptoms / effects : none

5. ACCIDENTAL RELEASE MEASURES

- Person related measures : none
- Environmental protection : none
- Cleaning equipment : not necessary
- Unsuitable cleaning products : not known

6. FIRE FIGHTING MEASURES

ULTIM8 Claddex Composite Panels are combustible at high temperatures. Dusts may form explosive mixtures with air in the presence of an ignition source. Prolonged contact with strong oxidizers may cause fire. Combustion by-products are Carbon monoxide and Carbon dioxide.

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam or alchohol foam, dry agent (carbon dioxide, dry chemical powder).

Fire fighting further advice: On burning may emit dense smoke without sufficient oxygen and emit toxic fumes, including those of oxides of carbon. Fire fighters to wear positive pressure, self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Accumulation of fine dust particles could pose explosion hazard. Remove burned or wet material to open area after fire is extinguished."

7. HANDLING AND STORAGE

- Handling : See handling and storage guide / no special regulations
- Storage : See handling and storage guide / no special conditions

SAFETY DATA SHEET

8. EXPOSURE / PROTECTION

- Respiratory protection : not required- Dust mask recommended
- Eye protection : wear eye protection when cutting or processing
- Body protection : not required

9. PHYSICAL PROPERTIES

- Appearance : Solid board
- Colour : Various (6 colour options)
- Odour : Natural
- Density : 750 Kg / M3 and higher

10. STABILITY

- Thermal decomposition : Above 200 Degrees Celcius
- Hazardous decomposition : releases chloride gases when burnt, others : unknown
- Use of Stabilizers : Lead free stabilizers used

11. TOXIC INFORMATION

- No Known Hazards

12. ECOLOGICAL INFORMATION

- Not bio-degradable
- Not water soluble
- No hazards to the environment

13. DISPOSAL OF GOODS

Can be recycled and reprocessed

14. TRANSPORTATION REGULATIONS

- Not required

15. REGULATORY INFORMATION

- No obligation for marking

16. DECLARATION

This information solely describes the safety requirements of the product and based on our current state of knowledge. It does not give any assurance concerning the products describing withing the statutory warranty regulations

RoHS (Restriction of Hazardous Substances)

CLADDEXTM TEST REPORT SUMMARY

Test Report

No. SHAMLC1515863001

Date: 13 Aug 2015

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Di-butyl Phthalate (DBP)	1000	mg/kg	30	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	30	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	30	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	30	ND

Notes :

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

Conclusion :

Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

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MULTI PURPOSE WET AREA LINING AND CLADDING



ULTIM8 MATERIALS

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AND TESTED BY
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