RECLADDING

SOLIDAL®
Pre-finished. Pre-fabricated.

SOLIDAL®

FULL SCALE WALL TEST: Early grade composite materials are considered highly fire hazardous materials, and have attributed to numerous building fires across the globe.

Project **RECLAD**®

Project RECLAD® has been established to help provide, building owners, architects, engineers, **safe sustainable** solutions once these high risk buildings have been identified for re-cladding.

In conjunction with the leading façade engineering firms, **SOLIDAL**® provides an umbrella consultancy service that considers all factors, according to safety, budget and aesthetic. Full transparency at all stages provided.

Email **info@solidalmetal.com** or
call +61 414885530 regarding your project requirement
and a **SOLIDAL**® consultant will reply shortly.

SOLIDAL®

IDENTIFIED ISSUE

- REPLACEMENT OF NON-FIRE RATE PANELS
- REPLACEMENT OF ASBESTOS
- WATERPROOFING ISSUES
- OVERUSE OF CAULKING AND SEALANTS
- PAINT FAILURE ON CLADDING MATERIALS DUE TO UV BREAKDOWN
- POOR STRUCTURAL INTEGRITY
- GENERAL UPGRADES

SOLIDAL®
FINISH OPTIONS SOLUTION

Choose matching colour from UNLIMITED **SOLIDAL®** Finish Options.
Replace existing cladding with **SOLIDAL®** Powdercoated, Anodised or PVDF Kynar® 500 and enjoy up to 20 year Performance Warranty.

**SOLIDAL®**
PREFABRICATED SYSTEMS SOLUTION

Choose **SOLIDAL®** Prefabricated System:
The German awarded Smartfix® System is ideal for recladding, due to it's narrow cladding zone and ease of installation.
Cassette Fixing, Curtain-Wall, VIZFix®

Explore new SOLIDAL® Surface Fabrication options Dimple and Perforated.
Customised perforations and stamping available on request.
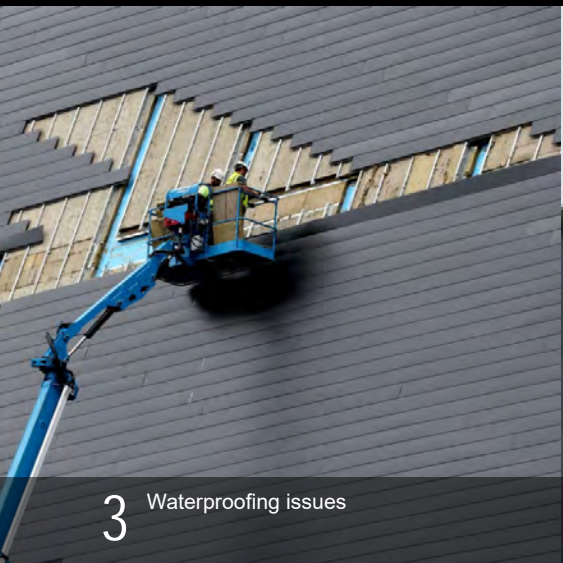Contact info@solidalmetal.com

For site inspections, please consult a SOLIDAL® representative.
Engineering reports and custom solutions provided.

1 Replacement of non-fire rate panels
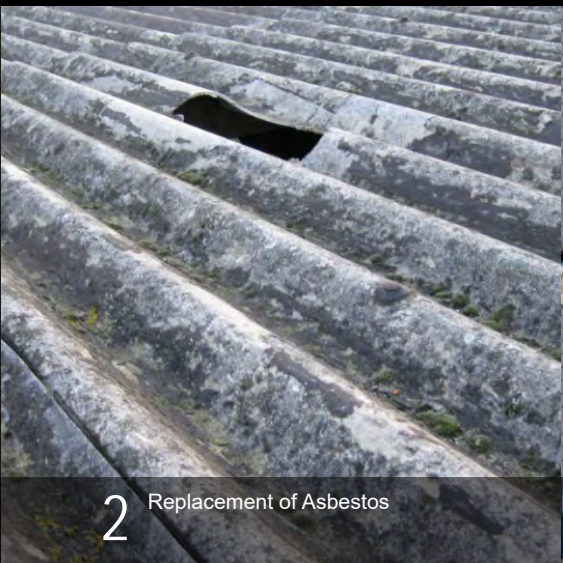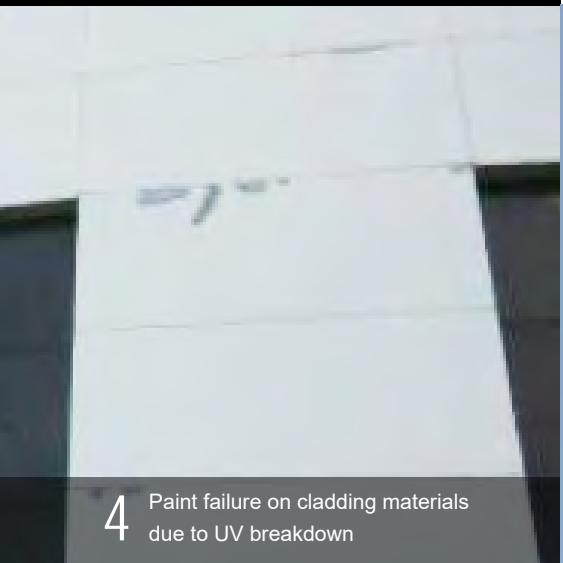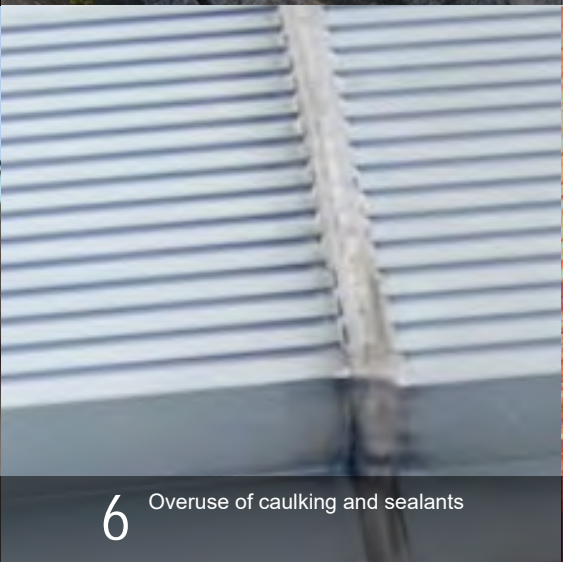
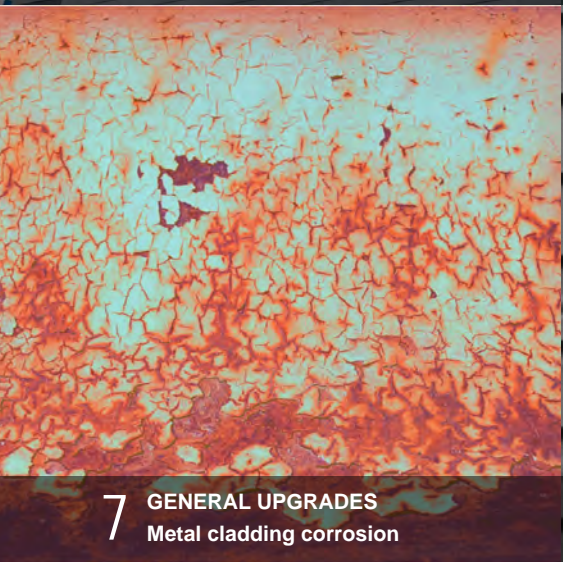2 Replacement of Asbestos

3 Waterproofing issues

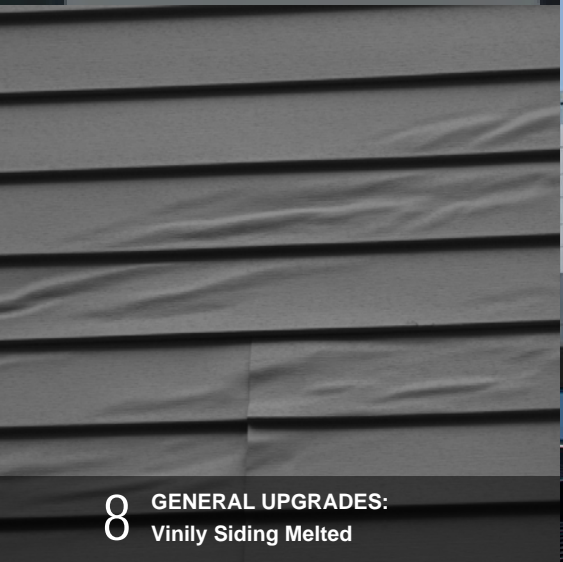4 Paint failure on cladding materials due to UV breakdown

5 Poor structural integrity
Wind Damage

6 Overuse of caulking and sealants

7 **GENERAL UPGRADES**
Metal cladding corrosion

8 **GENERAL UPGRADES:**
Vinily Siding Melted

BOX HILL HOSPITAL

Box Hill Hospital
Curtain Wall System, PVDF Kynar® 500 Finish

SOLIDAL®
Technical Specifications

Conversion Coating: Preparation of **SOLIDAL®** before Paint application is completed in 100% chromate free baths.

Typical ways to prepare Solid aluminium before painting is using CHROMATE baths, chromate process is highly cancerous and deadly.

Base Metal Cleaning: Cleaning and passivation of metal is completed by submersing **SOLIDAL®** materials into tanks which have an ALODINE 5200 Solution for up to 5 minutes at a time. This is critical to ensure the base metal materials are fully cleaned prior to coating materials being applied.

Brand of Cleaning Product: ALODINE 5200 MU Solution. Supplier HENKEL Germany

Cleaning and passivation of all SOLIDAL® is signed off by a P.P.G (PVDF) or AkzoNobel site engineer before coating is applied.

Please note: *Traditional chromate conversion has been reduced due to heavy metal pollution.*

SOLIDAL®	
Panel Thickness (mm)	2mm, 2.5mm, 3mm, 4mm up to 6mm
Available width (mm)	1240mm, 1500mm, 2000mm
Length (mm)	7000mm

SOLIDAL® DIMPLE & PERFORATED	
Panel Thickness (mm)	3mm, 4mm, 5mm
Dimpled Percentage	10%, 20%, 40%
Diameter Options (mm)	15mm, 30mm, 60mm, 120mm, up to 300mm
Depth of Dimple (mm)	2.5mm (Standard)

SOLIDAL® Physical Properties	* 3000 Series SOLIDAL®	** 5000 Series SOLIDAL®
Mechanical Properties		
Brinell Hardness	45	67
Elastic Modulus	70GPa	68GPa 9.9 x 106 psi
Elongation at Break	6.0%	8.0%
Fatigue Strength	68 MPa	110 MPa 15 x 103 psi
Poisson's Ratio	0.33	0.33
Shear Modulus	26 GPa	26 GPa 3.7 x 106 psi
Shear Strength	93 MPa	150 MPa 22 x 103 psi
Tensile Strength: Ultimate	160 MPa	250 MPa 37 x 103 psi
Tensile Strength: Yield (Proof)	125 MPa	190 MPa 28 x 103 psi
Thermal Properties		
Melting Onset (Solidus)	640 °C 1120 °F	610 ºC 1120 ºF
Specific Heat Capacity	900 J/kg-K 0.22 BTU/lb-°F	900 J/kg-K 0.22 BTU/lb-ºF
Thermal Conductivity	180 W/m-K 100 BTU/h-ft-°F	140 W/m-K 80 BTU/h-ft-ºF
Thermal Expansion	23µm/m-K	24µm/m-K
Electrical Properties		
Electrical Conductivity: Equal Volume	44% IACS	35% IACS
Electrical Conductivity: Equal Weight (Specific)	140%	120%

*   3000 Series **SOLIDAL®** is ideal for Kynar® 500 PVDF and Powdercating application
** 5000 Series **SOLIDAL®** is ideal for Anodise and Anodising Top Bright® Mirror application
(Please consult a SOLIDAL® representative for further information on Anodised grade Aluminium)

Safety & Sustainability

SOLIDAL® Solid Aluminium is rigorously tested to ensure maximum Building Safety.

Since the launch of Aluminium composite materials, more than forty years ago, there have been many hundreds of buildings clad with composite panels. These early grade composite materials are considered highly fire hazardous materials, and have attributed to numerous building fires across the globe. And very unfortunately at the cost of lives lost.
When exposed to open flame, these materials have proven to combust and propagate at extremely fast speeds.

SOLIDAL® performs additional in-house testing for each Project to ensure flawless results

SOLIDAL® FABRICATION and FIXING SYSTEMS **SOLUTIONS**

SOLIDAL® DIMPLE and PERFORATED

Customised Surface Prefabrication Options available on request.

SOLIDAL® offers an extensive range of Fabrication options, allowing easier and more accurate on-site installation, as well as innovative surface fabrication options.

SOLIDAL® panel can be pre-folded into limitless curved forms.
In-factory pre-folding allows **SOLIDAL®** Solid Aluminium to be curved precisely, under specified angles, leaving panel surface smooth and Finish undamaged.
Each curved segment is numbered and On-site Installation made easy with **SOLIDAL®** Panel Coding System.

For Wet-seal, Rainscreen or suspended Cassete Fix System, in house **pre-fabrication** of **SOLIDAL®** Cassette, according to project requirements, ensures highest quality results.
Stiffners are calculated and included for larger cassettes, cassettes with reinforcement profiles can be fabricated for any suspended cassette ventilated façade installation. Conventional cassette with angle clips is intended for Wet-seal Installation.

SOLIDAL® Panels with **pre-edge slot** are designed for Smartfix® installation System.
Smartfix® is supplied in Natural Anodised as standard. A wide range of colours and shades can be obtained on the surface of aluminium profiles through the process of electrocolouring.
Other available Finish Options are Powder Coating and Untreated Profiles (Mill Finish).

SOLIDAL® Panels surface pre-fabrication creates 3D surface effect.
Our machinery is designd to create standard **SOLIDAL®** Dimple Panel options, but also allows you to create your own. Customised Logo stamping available on request.

Contact info@solidalmetal.com

Choose **SOLIDAL®**
Prefabricated System:

> The German awarded Smartfix® System is ideal for recladding, due to it's narrow cladding zone and ease of installation.

> Cassette Fixing System options
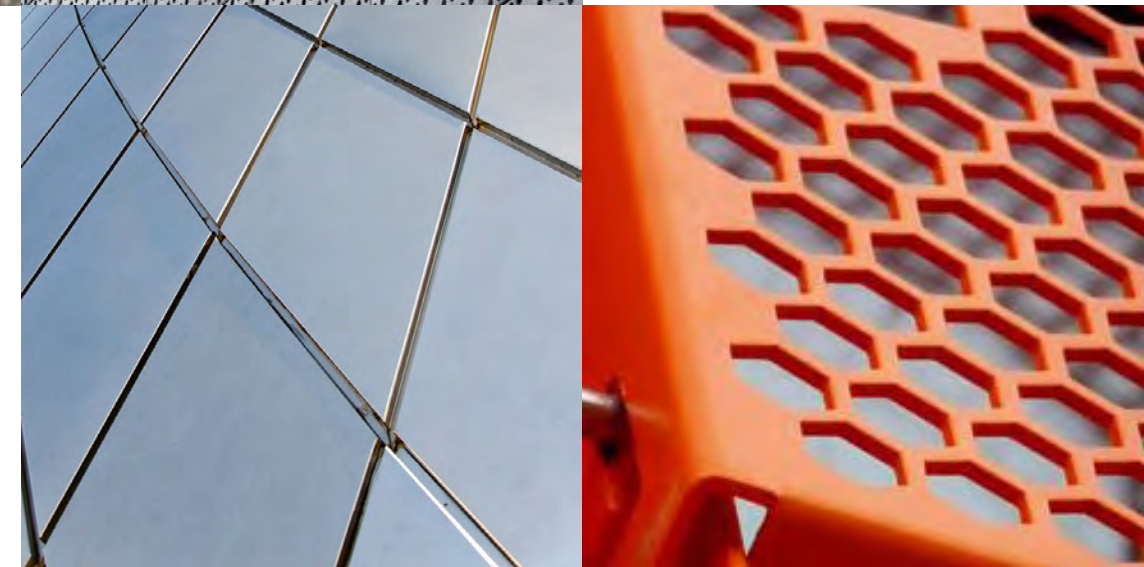
SOLIDAL® FOLDING
• without V-groove - for 2 and 3mm **SOLIDAL®** only
• sharp corners and small bending radius require V-groove

SOLIDAL® CURVING
large bending radius is created with specialised machinery, according to project specification

SOLIDAL®

SOLIDAL®
FIXING SYSTEMS SOLUTIONS

CHOOSE **SOLIDAL®** FIXING OPTION:

The German awarded Smartfix® System is ideal for recladding, due to it's narrow cladding zone and ease of installation. **SOLIDAL®** Solid Aluminium with pre-edge slot is designed for Smartfix® Installation System.

A large variety of designs can be achieved with **SOLIDAL®** pre-fabricated Cassette modules. A cost effective solution that is pre-fabricated in a factory environment according to clients requirements. Delivered directly to site ready for installation or to clients factory for inspection prior to the install process. Calculations are completed on a project by project basis, so the **SOLIDAL®** Cassette modules are not over or under engineered for the required application.

Explore new **SOLIDAL®** Surface prefabrication options Dimple and Perforated. Customised perforations, artwork designs and stamping available on request.

Contact info@solidalmetal.com

For site inspections, please consult a SOLIDAL® representative. Engineering reports and custom solutions provided.

concave rivet tag
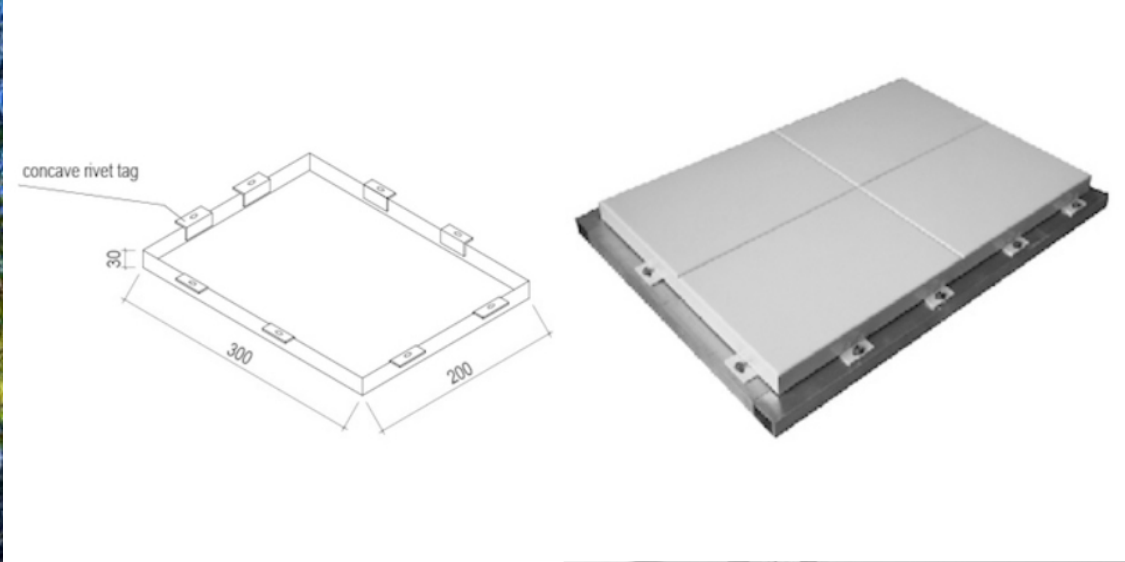
SOLIDAL®

SOLIDAL®
FABRICATION OPTIONS
PRE-FOLDING and CURVING

Replacement of existing Non-Fire Rate Panels with **SOLIDAL®** pre-folded Panels.

SOLIDAL® FOLDING Options:
- without V-groove (for 2 and 3mm **SOLIDAL®** only)
- sharp corners and small bending radius require V-groove

SOLIDAL® CURVING allows for replacement of existing Non-Fire Rate Panels that are required to follow any type of curved building shape.
Large bending radius is created with specialised machinery, according to project specification.

Both **SOLIDAL®** pre-folding and pre-curving is available with **SOLIDAL®** DIMPLE and PERFORATED Panel Options.

Contact info@solidalmetal.com

For site inspections, please consult a SOLIDAL® representative.
Engineering reports and custom solutions provided.

KYNAR® 500 METALLIC
Charcoal Silver - NU008 PVDF / PE

KYNAR® 500 Spectra
Sahara Crystal - NU0.. PVDF/PE

KYNAR® 500 Solid
Grey Violet - NUP014 PVDF/PE

KYNAR® 500 METALLIC
Dark Champagne - NU006 Nano PVDF

KYNAR® 500 Spectra
Saura 917 - NU061 PVDF/PE

KYNAR® 500 Solid
Mute Dull - NUP016 PVDF/PE

INTERPON POWDERCOAT
CITI® PEARL MATT YY245A
RGB 180, 184, 180 LRV 43%

INTERPON POWDERCOAT
SABLÉ BRILLIANCE TEXTURE YY377A
RGB 98, 102, 99 LRV 15%

INTERPON POWDERCOAT
SABLÉ BASS MATT YY270A
RGB 91, 92, 84 LRV 11%

ANODISE
AZTEC SILVER (E68NL)

ANODISE BRIGHT
SMOOTH ONYX (E25TG)

ANODISE
PALLADIUM COIN (E87CL)

SOLIDAL®
UNLIMITED CHOICE OF COLOURS

Kynar® 500®, Powder Coat and Anodised

SOLIDAL® offers unlimited range of Finishes and Colours with various Gloss levels.

Kynar® 500 Solid is standard three coat system, consisting of a primer, topcoat and clear coat with a minimum thickness of 28 microns.
Reverse side can either be a milled aluminium finish or a polyester base coat finish.
Nano PVDF application is available. Maximum gloss level for Kynar® 500 finishes is 30%.

SOLIDAL® Powder Coatings guarantee your color freedom featuring high gloss (up to 50%), pearl, metallic, textured, and matt finishes.

HOW TO SPECIFY:

Once you have chosen **SOLIDAL®** Architectural Coating, it's important to specify the correct product. We make specifying our cladding products and coatings easy, simply:

1. Nominate the thickness: 2mm,3mm or 4mm **SOLIDAL®**5 Series Marine Grade Alloy
2. Nominate the finish:
    Step 1. Nominate finish type:
    Powder Coat (Interpon D2015) Ultriva or
    PVDF Coil Coating (Kynar® 500®) or
    Anodise (15µm or 25µm Anodise)
    Step 2. Nominate the color, finish and product code,
    e.g. Charcoal Pearl Matt YY237A (refer to Nu-core colours & finishes catalogue)

3. Nominate the fixing system (refer to **SOLIDAL®** Fabrication catalogue):
    Smartfix® Fixing /
    Cassette Fixing /
    VIZFix System /
    Curtain Wall
    Perforated / Dimpled

Please contact the **SOLIDAL®** Customer Care Team for additional specification support and advice.

SOLIDAL® Kynar® 500® and SOLIDAL® Powder Coat can match any RAL Colour Code

Utilise RAL sample color cards and follow the specification process below:
STEP 1: Choose your colour RAL chart code (for example RAL2009)
STEP 2: Specify RAL2009 (PC)[1] / NU2009 (PVDF)[2]

[1] Specify PC for Powder Coat
[2] Specify PVDF for Kynar® Coil Coating

Colour Matching: provide **SOLIDAL®** with a colour control sample for colour matching using our colour spectrometer.

visit **www.solidalmetal.com** and Get Inspired by **SOLIDAL®** Colour Collections.

SOLIDAL®

SOLIDAL® KYNAR® 500 Coil coated PVDF
High-Performance Architectural Finishes that last the test of time

Modern times have seen the rise of metal as a prime exterior material, largely due to its rugged durability, design versatility, and aesthetic possibilities.

For all its bravado and beauty, metal tends to be superficially weak and is generally available in but a single color. Thus, in order to be both functional and pleasing to the eye, metal must be coated with a unique finish which beautifies with color and resists any chalking, pitting, chipping, orpremature aging.

Noted by architects around the world, Kynar 500® PVDF resin-based coatings are precisely the product necessary to provide such protection to **SOLIDAL®** Solid Aluminium.

SOLIDAL® Coil coating is a continuous, automated process for coating Solid Aluminium metal before fabrication into end products. The aluminum substrate is delivered in coil form from the rolling mills. The metal coil is positioned at the beginning of the **SOLIDAL®** coating line, and in one continuous process, the coil is unwound, pre-cleaned, pre-treated, pre-primed, and pre-painted before being recoiled on the other end and packaged for shipment. All of this happens at up to 700 feet per minute.

PPG Architectural Coatings

KYNAR® BY ARKEMA

Solid Ivory Gloss White - NU020
PVDF/PE

Spectra Jewel - NU059
PVDF/PE

Spectra Sunset - NU0..
PVDF/PE

Spectra White Silver - NU0..
PVDF/PE

Metallic Silver Gloss - NU037
Nano PVDF

Solid Gloss Traffic Red- NU045
PVDF/PE

Metallic Dark Pearl - NU009
PVDF / PE

Metallic Pearl Green - NU049
PVDF / PE

SOLIDAL®

SOLIDAL® POWDERCOATED
Ultra Durable Architectural Powder Coating

Providing ultra protection from the elements the range exceeds global weathering standard AAMA2604-13, guaranteeing excellent color retention and high resistance to chalking.
Exceptional endurance to environmental stressors including high levels of UV radiation, humidity, heavy pollutants and extreme temperatures are achieved through ultra durable polymer technology engineered to withstand the weathering extremes of Australia and New Zealand.

> Available in a wide range of finishes and gloss levels
> Ultra durable performance for all exterior and interior architectural projects
> Meets global architectural specification AAMA2604-13
> Guaranteed up to 20 Years Gold Global Warranty

AkzoNobel

Interpon D2015
20 years
Gold Global Warranty
AAMA 2604-13

MONUMENT® MATT YN201A
RGB 62, 59, 56 LRV 8%

TITANIUM PEARL MATT YY263A
RGB 97, 101, 96 LRV 13%

CHARCOAL MATT YL264A
RGB 60, 67, 69 LRV 6%

ETERNAL SILVER SATIN YW100C
RGB149,154,161LRV30%

LYCRA STRIP GLOSS YK063A
RGB 200, 217, 84 LRV 53%

BRONZE PEARL MATT YY225A
RGB 77, 71, 56 LRV 8%

EBONY MATT YN201A
RGB 49, 54, 51 LRV 4%

SHAMROCK GLOSS YK043A
RGB 71, 110, 64 LRV 13%

SOLIDAL®

SOLIDAL® Anodise and 5052H24 SOLIDAL®
Top Bright® Mirror (High Reflective)
### Natural beauty, outstanding durability

Specific process parameters of real metal anodising and sustainability of the environment are key underlying strengths of the new **SOLIDAL®** façade solution. The AAF Evershield Coastal Anodise finish offers outstanding durability, over a 100 Year Life Cycle, making the **SOLIDAL®** façade solution, both Non Combustible and 100% recyclable.
With the Addition of the Illustro series, the Evershield Range has now broadened into 3 lustres.

Matt: The traditional Matt series combining a timeless and natural matt lustre.

Illustro: The exclusive new Evershield Illustro series is cleverly designed to subtly reflect with the changing light conditions throughout the day creating a fusion with natural building elements and rendered finishes.

Bright: The Bright series is just brilliant. A classic polished metal finish that stands the test of time.

Top Bright® Mirror (High Reflective) Anodising: Optional 5052 AP1 AAMG or 5005H14 **SOLIDAL®**
Anodise thicknesses of at least 10µm for indoor and 20/25µm for outdoor applications are recommended, depending on exposure.

AAF

EVERSHIELD®
HIGH GRADE ANODISING
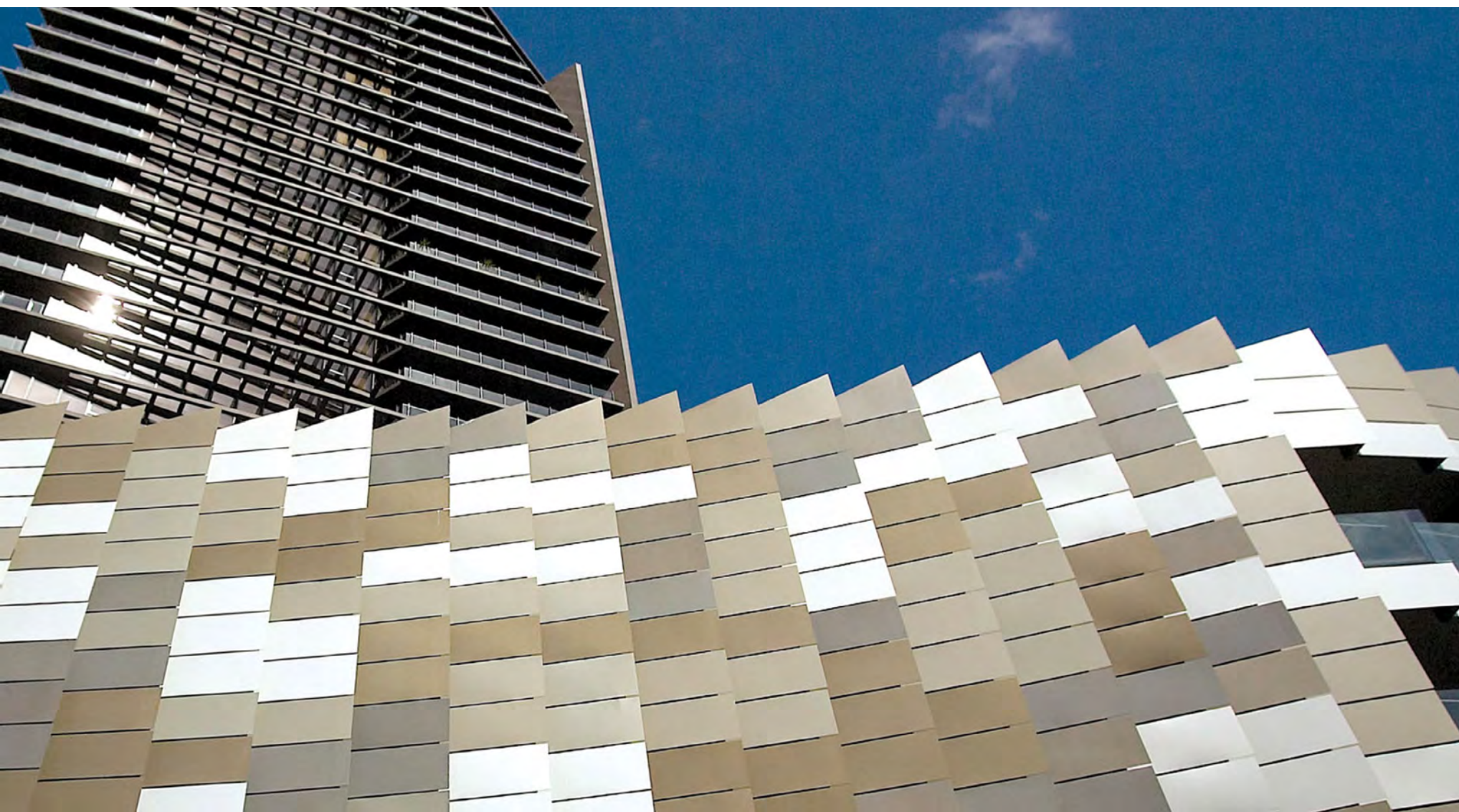
BRIGHT

DIAMOND LIGHT (E87CG)

MONACO STONE (E65TL)

GUN BARREL (E25TL)

GOLD ODYSSEY (E78GL)

STELLA GREY (E78NM)

STAR DUST (E70NM)

BURNT SIENNA (E29TM)

EBONY (E26TM)

SOLIDAL®

STEP 1 **SOLIDAL®** **Fabrication**

Watermark® offers an extensive range of **SOLIDAL®** pre-fabricated options allowing easier and more accurate on-stie installation, as well as innovative surface treatments, dimpling and perforaitons.

Each item is numbered and On-site Installation made easy with **SOLIDAL®** Panel Coding System.
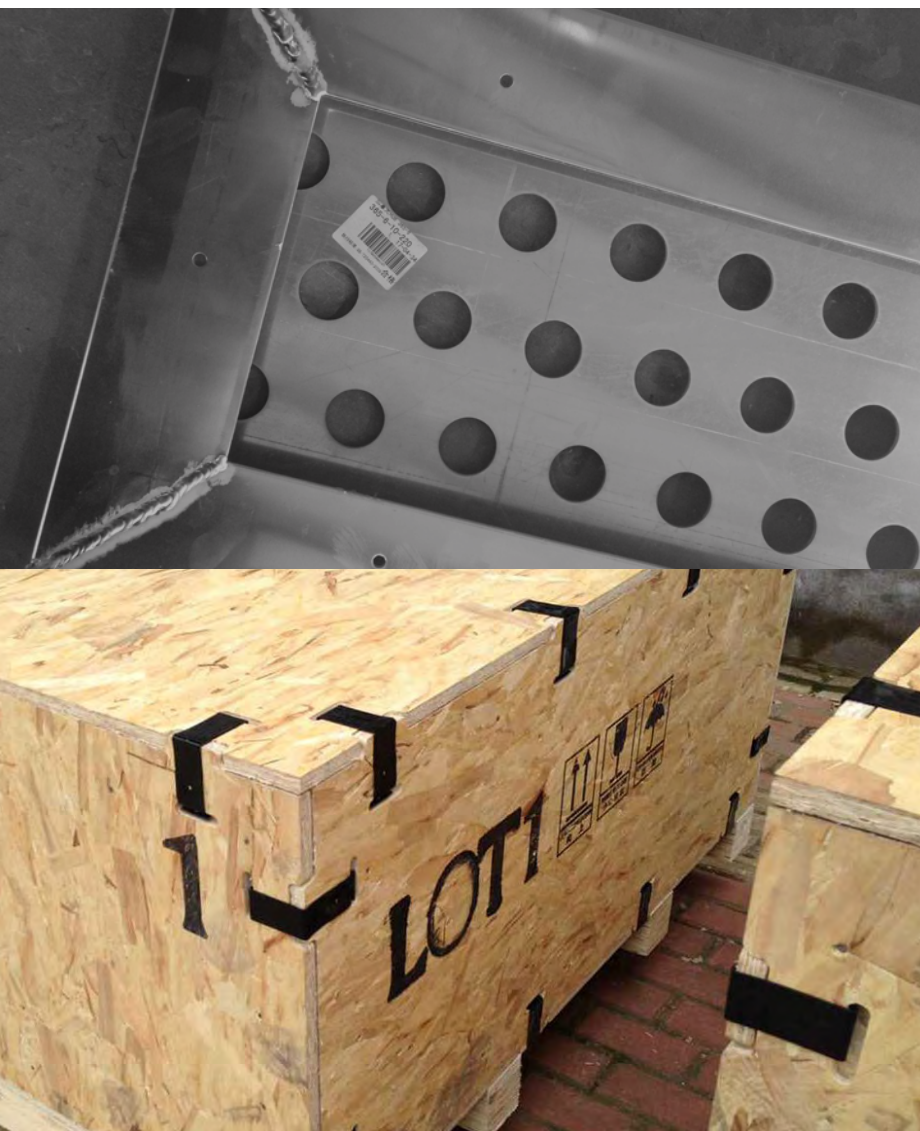
STEP 2 **SOLIDAL® ERP**

All **SOLIDAL®** orders will have ERP tracking.
ERP tracking assists in the tracking all panel order schedules.

Assisting both customer and **SOLIDAL®** factory for tracking and monitoring quality production for complicated and non complicated façade installations.

STEP 3 **SOLIDAL® Specialised Packaging Solutions**

SOLIDAL® have contracted the same packaging solutions for provider as I.B.M and Hewllet Packard computers. Ensuring safe delivery of materials.
SOLIDAL® Bright P Packaging is the most tried and resilient available, withstanding pressures up to15 tonnes for a 12mm case.

• Provides excellent product protection
• Collapsible returnable pacakaing System
• Ideal for returnable / on-forwarding / reusing
• Stacking up to ten high when loaded Vibration
• Drop tested
• Weather resistance
• Impact and pressure tested

Having a collapsible returnable/forwarding packaging system allows for numerous savings through handling, transport and storing.
When comparing returnable plywood packaging solutions to alternative materials such as steel or plastic one must consider; environmental impact, capital investment needed, total cost of system including transport/storage/repairs, ergonomics and safety for workers, and much more.

SOLIDAL®

DISCLAIMER:

Nu-core® **SOLIDAL**® has taken due care to prepare the enclosed literature to assist the end user. Nu-core® **SOLIDAL**® is not liable for any errors and accepts no liability for information which may be misleading or misinterpreted.

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smartfix®   reddot design award   PPG Architectural Coatings   KYNAR BY ARKEMA   AAF   AkzoNobel