





# DECO ABOUT

SURFACE TECHNOLOGY SOLUTIONS

Deco is Australia's surface technology specialist who offer an unrivalled range of finishing processes and surface treatments for aerospace, Industrial and architectural applications.

DECO is a rapidly growing, Innovative family-owned Australian business who are committed to delivering the highest standards of quality and service to our customers all over Australia.

Since 2004, DECO has revolutionised the Australian building industry with our innovative sublimation finishing technology for powder coatings. Our ability to transform almost any piece of aluminium has provided beautiful and durable building solutions for an endless range of applications.

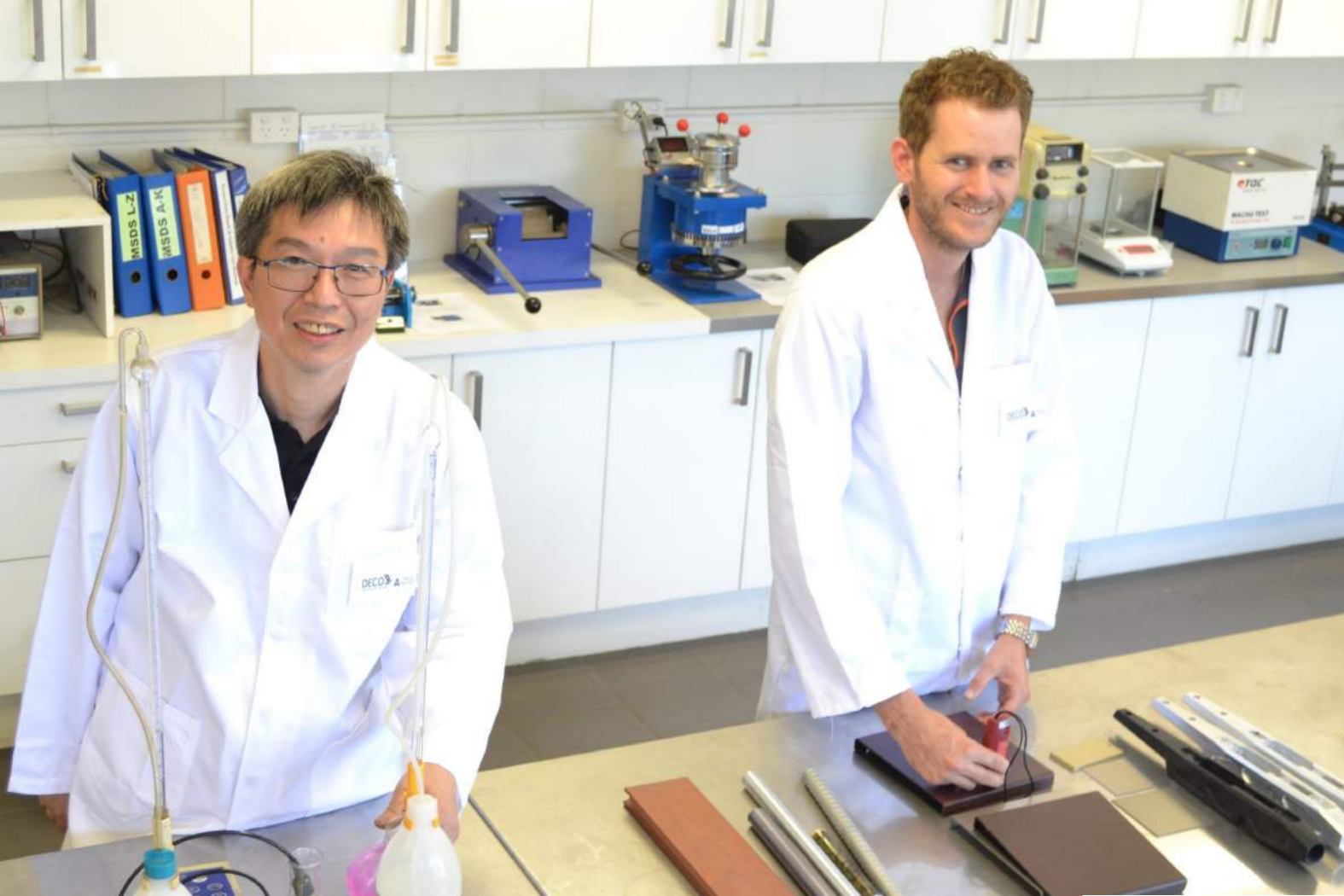
In 2018, Deco took over the operations, experienced employees and assets of Impreglon Australia Pty Ltd at Minto NSW. This has enabled Deco to now offer a range of Industrial finishing solutions including anodising, wet and dry blasting, E coating, duplex coatings, Ceramic and Teflon coating, coil coating, vibratory rumbling and polishing, zinc flake coating and other finishes. These surface treatments and coatings are processed to the relevant standards and with the same high standards of quality and service for which Deco is renowned.



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Deco quality and testing laboratory

# DECO QUALITY AND TESTING

SURFACE TECHNOLOGY SOLUTIONS

Deco has an unrivalled capability when it comes to quality management and testing for surface treatment and coatings in Australia. The Deco operations and processes are accredited to ISO 9001- 2015, and all Deco processes comply with the relevant Australian and international standards.

Anodising and other processes are US Military Specification compliant. Anodising process control is according to MIL-A-8625F, and aluminium alloy conversion coating according to MIL DTL-5541F. Deco powder coating and sublimation processes comply with the Australian Standard AS 3715 and AS 4506 together with the international Qualicoat and Qualideco Specifications.

Deco has a fully equipped chemical, environmental and physical testing laboratory. Deco is the only surface finisher in Australia who has in house testing equipment for neutral salt spray, acetic salt spray and differential scanning calorimetry (DSC).

## IN HOUSE TESTING

Anodising	MIL-A-8625F
Anodising spot sealing test	ISO 2143:2010
Aluminium conversion coating	MIL DTL-5541F
Coating thickness	ASTM B137/ ISO 2360
Corrosion: Neutral salt spray test	ASTM B117
Corrosion: Acetic acid salt spray test	ISO 9227
Dry adhesion test	ISO 2409
Gloss measurement	ISO 2813
Cupping test	ISO 1520
Bending test	ISO 1519
Impact test	ISO 6272-2 / ASTM D 2794



Deco acetic salt spray and neutral salt spray test cabinets







## ANODISING AND HARD ANODISING

DECO is the most experienced commercial hard anodising service in Australia. Deco offers a range of anodising solutions where customers special requirements for thickness and sealing are available.

Anodising is an electrolytic surface treatment process which creates a durable protective coating. By racking metal parts and dipping them in an electrically-charged acid solution, the surface of the metal itself is converted into a tough, aluminium oxide film. Aluminium oxide is one of the hardest substances in the world.

Hard anodising is achieved by lowering the temperature of the acid baths in a controlled manner to create a tougher, thicker, more durable protective coating. Hard anodising is ideal for hardwearing applications in tough conditions, such as aerospace components, engineering applications, high-speed machine parts such as printing presses and conveyors and cookware applications. Hard anodising gives metal components greater longevity and durability. Hard anodising is the most hard-wearing surface available for aluminium.

### BENEFITS

- High degree of wear resistance
- Significantly improves wear resistance in aggressive environments
- Resistant to extremes of temperature (4000C and 20000C In short cycles)
- Suitable for subsequent processing (sealing, dyeing /colouring, non-stick, paints, powder coating)
- Non-chip: the anodised surface is part of the metal itself and cannot chip or blister
- Interior or exterior applications
- Non-toxic which is ideal for cookware (hard anodising)



Deco hard anodising



Left: Deco anodising, hard anodising and e-coating process lines





## DECO DUPLEX COATINGS

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DECO has a unique capability to develop and apply multiple coating systems to components, to provide customers with custom surface finishing solutions for their requirements. An example of this capability is Deco's Nucotec™ Plus process, where Deco developed a unique coating system to be applied to low pressure cast aluminium blocks for the new Tai Kwun arts precinct in Hong Kong. The architect required a highly durable coating that had a metallic appearance for a contemporary architectural building façade.

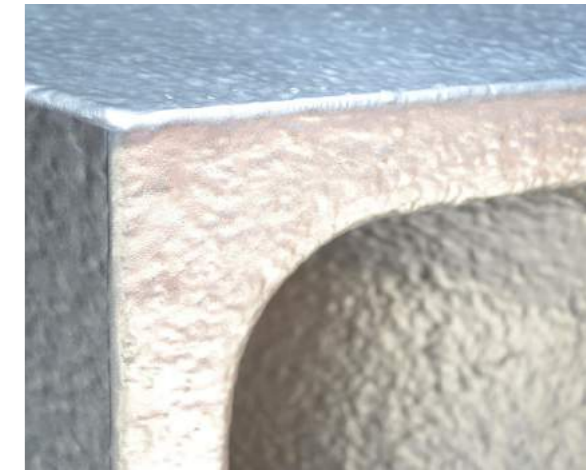
Deco developed the Nucotec™ Plus process and built special equipment to enable this surface to be produced. The Nucotec™ Plus process involves a unique combination of an anodic coating combined with controlled E coating deposition which is impregnated with stainless steel flakes.

Deco has the capability to develop and apply numerous multiple coating systems that combine anodising, hard anodising, E coating, specialty coatings and powder coating, to meet the special requirements of our customers.

### BENEFITS

- Greater flexibility in design and specification
- Highly durable coatings with superior wear and corrosion resistance
- Unique coating systems with multiple properties
- Solutions available for architectural and building designs
- Specialty coating systems for aerospace and defence
- Automotive and Industrial applications

Left: Nucotec™ Plus facade. Tai Kwun arts precinct-Hong Kong



Nucotec™ Plus metallic e-coating and anodising







## SPECIALIST ABRASIVE BLASTING

DECO has unique expertise as a specialist in a range of dry and wet abrasive blasting processes for metallic surfaces.

Wet blasting involves the propelling of abrasive materials mixed with air and water, against metal components at high speed and pressure, allowing a component to be cleaned, degreased, deburred and sharp edges or die marks removed from metal products. With wet blasting, various surface finishes can be created for metal components, such as a glossy or satin peened surface, as the water acts as a lubricating cushion between the abrasive and the metal.

Dry abrasive blasting is an effective pre-treatment prior to powder coating or e-coating. Abrasive blasting strips the metal of scale, rust and surface contaminants, that could cause corrosion or degradation. This process can be done by hand for larger objects or with Deco's automated spindle blaster for smaller components. Dry abrasive blasting creates a clean, rough surface finish for powder or E coatings to key into for greater durability.

### BENEFITS

- An excellent surface pre-treatment prior to coating
- Wet blasting produces an attractive decorative finish
- Approved for food contact when seasoned with oil
- Shot peening stress relieves products
- Approved for use on medical components



Deco GBB medical grade finishing

Left: Deco heavy steel blasting





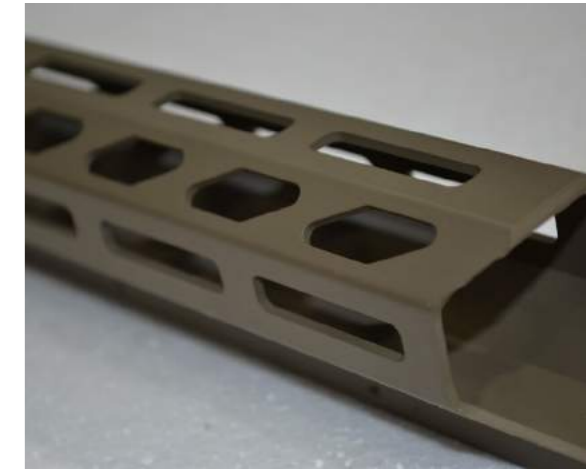
## CERAMIC COATING (CERAKOTE)

Products can be protected with a tough, thin-coat finish with high wear resistance. Ceramic coatings can be applied to more substrates than any other finish. Substrates include metals, wood, plastics and polymers, and can be used for a range of applications including industrial, defence, sporting, automotive and personal use applications.

DECO is an accredited applicator of Cerakote, the world-class leader in thin-film ceramic coating. Cerakote uses advanced resin technology to create a tougher, thinner coating, making it excellent for application to aerospace components, Industrial equipment, military firearms, adding protection without compromising functionality.

### BENEFITS

- Excellent corrosion protection for military weapons exposed to extreme conditions
- Resistant to direct and indirect impacts from external forces
- Attracts less particles of dust than other finishes, keeping products cleaner
- Heat resistant up to 600 degrees C
- Bonds to almost any material
- MIL SPEC colours available
- Resistant to most solvents and chemicals

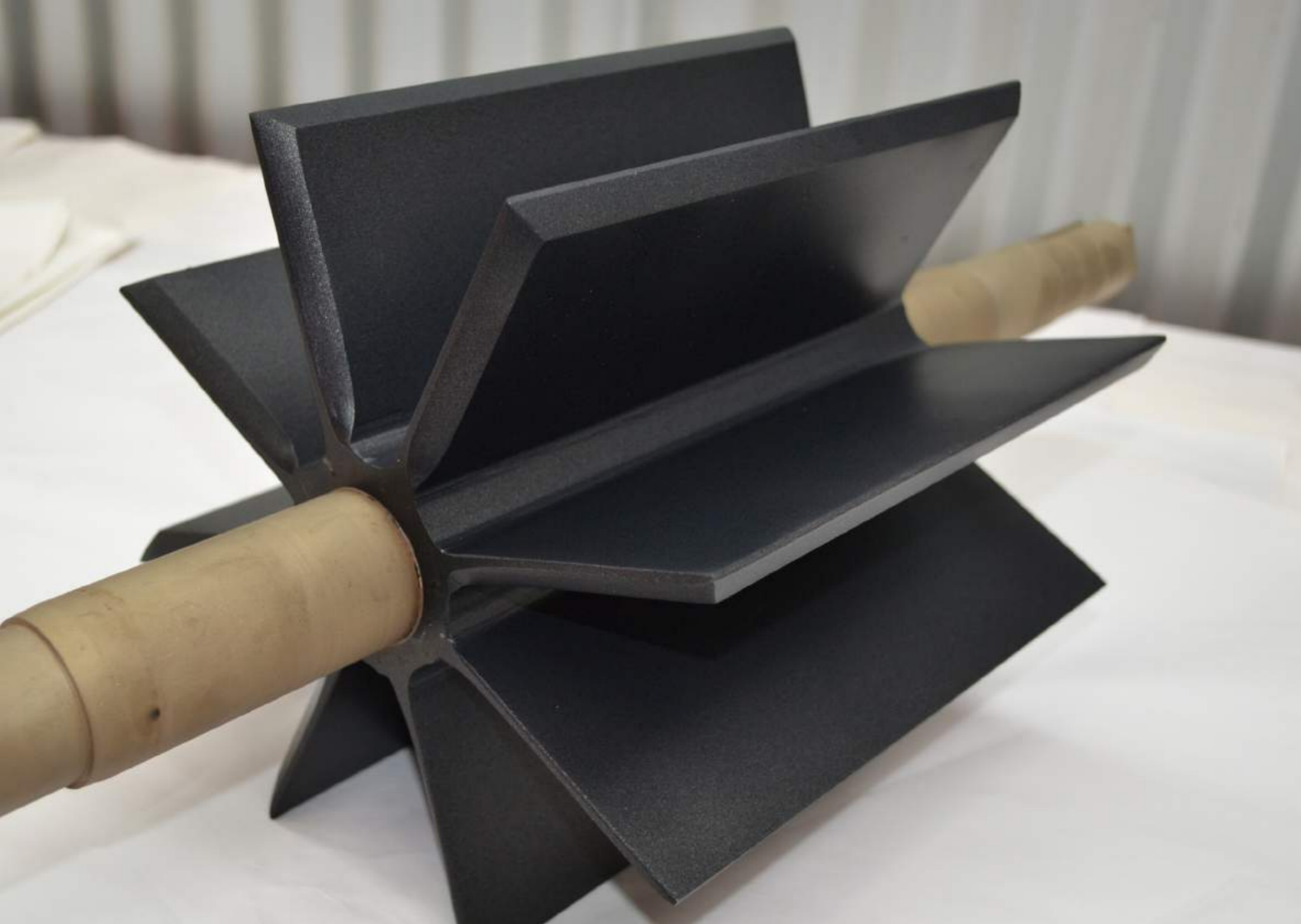


Deco Cerakote ceramic coating

Left: Cerakote and Teflon controlled cure oven







## DECO TEFLON COATING

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Teflon is a durable, non-stick fluoropolymer coating which protects products by preventing wet or dry, hot and cold materials from adhering to its surface. PTFE (or Teflon) coatings are applied to products using liquid spray or powder application, and are an excellent way to prevent a buildup of lubricants, paint, glue or other substances from adhering to metal components, making them highly effective for reducing friction in machinery parts. Teflon is an excellent coating for a variety of aerospace and industrial applications which include engineering parts, agricultural equipment, fan blades, garden tools, automotive fasteners, fuel injectors, saw blades and more.

Deco also has the experience and capability to apply Teflon coatings to selected surfaces of a component.

Teflon's non-toxicity, non-stick, heat and water-resistant properties also make it a popular coating choice for commercial and domestic cookware.

### BENEFITS

- UV stable
- Heat resistant up to 260 degrees C
- Non-toxic and approved for food contact
- High resistance to the absorption of oil and water; corrosion resistant
- Non-stick qualities make Teflon-coated parts easy to clean
- Graffiti marks will wipe off with a damp cloth
- Good electrical insulation qualities
- Excellent protection against Australian climate; suitable for valves in extreme conditions

Left: Component with Teflon coating on selected surfaces



Deco Teflon coating application







# DECO POWDER COATING

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DECO's powder coating creates a versatile and durable finish for both steel and aluminium.

Qualicoat is the international standard for the highest quality of powder coating, and Deco uses Qualicoat approved materials and processes. Deco has the flexibility to pre-treat aluminium, steel and galvanized steel, as well as utilizing batch or on-line powder coating, enabling Deco to offer the widest range of powder coating solutions for our customers.

Deco can process the full range of aluminium extrusions up to 7.2m long, as well as fabricated steel and aluminium components. DECO has the skill and experience to apply a wide range of powders including super-durable, polyester, polyurethane, epoxy and PTFE. DECO powder coating is available in a wide range of colours and textures, and can be used for a broad range of industrial and architectural applications including engineering and machinery parts, automotive components, vehicle and machine panels, building and infrastructure, agricultural equipment, signage and more.

## BENEFITS

- Durable and aesthetically pleasing appearance
- Huge range of colours and finishes available
- Excellent resistance to corrosion and UV
- Textured, matt, satin and gloss finishes available
- Aluminium pre-treatment and conveyor line maximum length 7500
- Batch oven capacity 2400 wide x 1800 high x 8000 long 800mm

Left: Deco conveyorised powder coating line with on-line pre-treatment



Deco electrostatic powder application







## SUBLIMATION FOR INDUSTRIAL APPLICATIONS

Sublimation is the process whereby a substance changes from a solid state directly into a gas without going through a liquid phase. DECO's sublimation technology uses controlled conditions of heat and pressure to transfer a printed image directly into a powder coated surface. The sublimation inks penetrate the full depth of the powder coating (instead of simply being 'printed' on the surface's top layer) ensuring a durable, long-lasting image.

DECO's sublimation process has been in use in Australia since 2004 for DECO Architectural, but it is also a versatile process that can be used for a wide range of metal products across a broad spectrum of applications. These applications include non-combustible compliance and safety signage, signage for public transport, fire engine control panels, engineering and agricultural equipment and directional signage.

### INDUSTRIAL APPLICATIONS

- Highly durable Qualicoat Class 2 polyurethane powder coating for signage and other applications
- Unlimited choice of colours and images available
- Anti-graffiti
- Accurate photographic reproduction
- Maximum single sheet size 1500 x 4000
- Large Images can be accurately aligned across multiple panels



DecoSign fire truck control panel



Left: Sydney Trains Chatswood station seating signage by DecoSign





## **CONTACT US**

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