



MondoClad

OUR COMMITMENT
TO SUSTAINABILITY





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At HVG Facades our commitment to sustainability is one of our core business objectives – we aim to minimise any negative impact we have on the environment.

When it comes to choosing partners, we seek out only ethical manufacturers who have proven outstanding environmental credentials, achieved by adhering to strict processes and procedures.

The materials we offer provide long life performance, are low maintenance and extremely durable, therefore reducing the overall environmental footprint of the building.

And we adhere to strict health and safety principles in our workplace, not just for our stakeholders, but also to ensure that our operations never place the local community or environment at risk of injury, illness or damage.

Together with our business partners, HVG Facades continuously looks for opportunities to support and promote long term sustainability initiatives that have a positive impact on the environment as a whole.

THE SUSTAINABILITY OF ALUMINIUM

The Future of Building

Like many industries today, the building and construction trade is faced with countless environmental challenges. As the world looks towards a more sustainable future, multiple issues need to be considered, including: the impact on climate change, sustainability of materials, and methods of waste disposal. As humans continue to be concerned with the lifecycle of a building and its fittings, aluminium has increasingly become the material of choice.



Made from alloys that are weather-proof, corrosion-resistant and immune to the harmful effects of UV rays, aluminium building products offer optimal performance and longevity. They also have no negative impact on indoor air quality or any harmful effect on soil, surface or groundwater.

Aluminium is strong, durable, flexible, impermeable, lightweight, corrosion resistant and 100% recyclable. It can be alloyed with different elements, take many forms, and have various surface finishes - making it an appealing material for use in a vast array of applications.

Aluminium's contribution to a more sustainable future has become more widely recognised, and its reputation as an 'energy and resource bank' is now seeing it used in place of other metals such as steel.

The History of Aluminium

Commercially produced since 1888, aluminium is the second most used metal in the world and the third most abundant element in the Earth's crust. It can be recycled endlessly without compromising any of its unique properties or quality, consequently approximately 75% of aluminium ever produced is still in use today.

Aluminium's versatility has made it a popular application in the construction and building industry. Air, road, rail, sea transport, packaging and electronics are just some of the many industries that widely use aluminium.



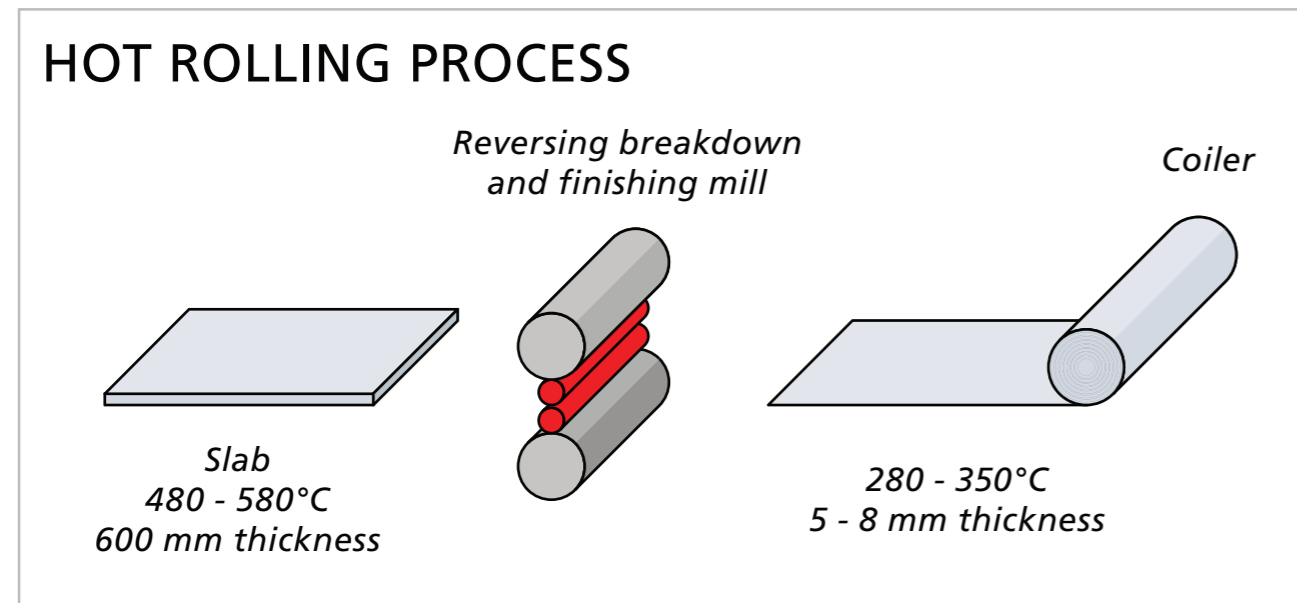
Sourcing of Raw Materials

Aluminium is produced from one of two sources: primary production from ore and recycling of aluminium scrap. The main ore employed in the primary route is bauxite. Bauxite is first refined into an intermediate product, alumina, before being smelted into aluminium.

Australia is a world leader in bauxite production, with other major producers including China, Brazil, India and Guinea.

Production of Flat Sheet Material

Aluminium flat products are produced via a rolling process. Large aluminium slabs are fed into rolling mills that turn the slabs into aluminium sheets of various thicknesses. The process typically begins with a hot rolling method, where the block is fed back and forth through a reducing roller. Final rolling takes place through a cold roll process, which allows sheets to be reduced to a thickness of 0.15mm. Aluminium sheets can be thinned even further into foil, with a thickness of 0.007mm. Sheets can then be formed for an abundance of uses, e.g. as cladding panels.



Finishing

Aluminium is one of the few metals that can be left in its natural state without 'finishing'. It will naturally oxidise when exposed to air, and this thin film of oxide then fully protects the aluminium from further oxidation.

Anodising

Anodising is an electrochemical process that reinforces the natural oxide film on the aluminium surface, increasing its hardness and improving its resistance to corrosion and abrasion. Anodising leaves a decorative matt silver finish to the surface, and coloured surfaces can also be achieved by sealing metallic dyes into the anodised layer.

PVDF Paint

Continuous coating is the most common process for applying PVDF coating to rolled aluminium products. The aluminium substrate is delivered in coil form from the rolling mills. The coil is positioned at the beginning of the line, and then unwound at a constant speed, passing through pre-treatment, coating baths and curing furnaces before being recoiled.

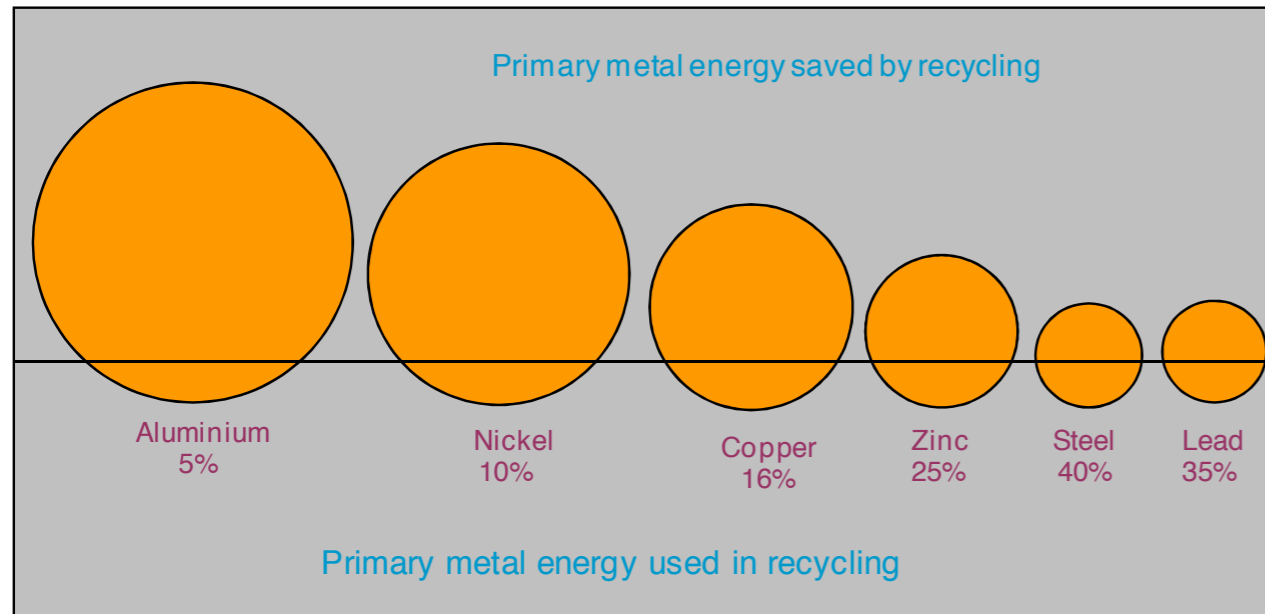
Apart from routine cleaning for aesthetic reasons aluminium requires minimal maintenance, which undoubtedly translates into a major cost advantage, as well as an ecological one over the lifetime of a product.

PVDF paints have an extremely low wear rate, calculated at only a few microns every 10 years.

PVDF paints consist of a fluoropolymer, acrylics, pigments, catalysers and additives. The fluoropolymer is not soluble in water, which means that no contamination of groundwater takes place. PVDF particles that remain in the ground are environmentally neutral. The acrylic can be dissolved from the PVDF surface by UV-penetration and can be destroyed by UV-radiation.

Recyclability

Aluminium is 100% recyclable and most importantly, experiences no loss of properties or quality during the recycling process. Recycling aluminium requires only 5% of the energy that's used to create new aluminium and emits just 5% of the greenhouse gases. It's for these reasons that approximately 75% of the aluminium ever produced is still in use today.



The recycling of aluminium offers not just economic value, but also a myriad of ecological advantages. It protects natural resources, minimises any interference with nature and relieves the burden placed on landfills.

A Lifetime of Service

Aluminium building products are made from alloys that are weatherproof, corrosion-resistant and immune to the harmful effects of UV rays, ensuring optimal performance and longevity.

Perhaps one of the most famous examples of aluminium's durability is the dome of San Gioacchino ai Prati Castello Church in Rome. Clad in aluminium sheets in 1898, today, more than 100 years later, it's still in pristine condition.

MONDOCLAD® SOLID ALUMINIUM

MondoClad® solid aluminium is manufactured from more than 30% recycled material and is supplied as a pre-finished panel.

The paint is applied in a continuous process before the aluminium is fabricated into panels. This minimises the need for additional transportation compared to using a powder coating process.

PVDF coating is a highly efficient 'closed loop' process. The coating curing ovens burn the harmful VOCs and use them as fuel, therefore saving energy and eliminating pollutants.

MondoClad® PVDF coatings make surfaces easy to clean because they repel dirt, and any cleaning that is necessary can be done simply with a combination of water and environmentally friendly cleaning products.

Refer to **MondoClad®** Cleaning & Maintenance Guide for further details.

MondoClad® PVDF coating is produced in accordance with the American Architectural Manufacturers Association Standard AAMA 2605-11. It includes Specification, Performance Requirements and Test Procedures.

The AAMA 2605 high performance specification is the highest standard available for organic coatings on architectural aluminium extrusions and panels – it's reserved only for products that offer superior performance.

MondoClad® plays a key role in the sustainability of new buildings and the renovation of existing ones. Thanks to its high-performance across a range of areas, it contributes to better energy efficiency, greater safety and enhanced comfort of new buildings.

The versatility of **MondoClad®** allows for an easy upgrade of existing buildings, including historic ones.



MondoClad®



By **HVG** façades



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