

A Guide to Aluminium Anodising

by [Jane McMullen](#) On May 23, 2023

Aluminium, known for its lightweight yet robust nature, can be a highly useful metal. But did you know it's possible to enhance those natural qualities even further? Our experts are exploring the processes and benefits of aluminium anodising.

What Is Aluminium Anodising?

[Aluminium anodising](#) is a process that involves forming a protective layer on an aluminium surface. The first step is immersing the aluminium in an electrolytic solution. Next, an electric current is passed through the solution. This then leads to the controlled formation of an anodic oxide layer. The final result is hard-anodised aluminium.

Benefits of Aluminium Anodising

The layer formed from the anodising process [enhances the aluminium](#) in several ways. Amongst the most notable benefits are:

- **[Improved corrosion resistance](#)** – The anodised layer acts as a barrier between the aluminium and the surrounding environment. This layer is more durable than natural oxide coatings and ensures long-term protection.
- **Aesthetic Customisation** – [Colour anodising](#) is a process that involves adding a dye to the anodic layer. This can lead to a wide range of colour options, allowing for visual customisation.
- **Enhanced durability** – Hard-anodised aluminium is known for being strong. It is resistant to scratches, abrasions, and general wear and tear.
- **Eco-friendly solution** – Aluminium is already a [sustainable material](#) and anodising further boosts its characteristics. There are no harmful by-products from aluminium anodising, while the anodised layer itself is non-toxic. This makes it a safe and environmentally-conscious choice for coating metals.

Applications of Aluminium Anodising

With a wide range of benefits to hard-anodised aluminium, it's unsurprising the process is [found in several industries](#):

- **Architecture and construction** – Anodising provides durability, weather resistance, and a range of colours. As such, it's often used for architectural features such as window frames and cladding panels.

- **Automotive industry** – Colour anodising is regularly used to [customise external car parts](#), such as wheels, grilles, and mirror housings. Thanks to its corrosion resistance, this ensures a long-lasting finish.
- **Electronics and appliances** – The anodising process provides electrical insulation and protection. This makes it ideal for laptops, smartphones, kitchen appliances, and audio equipment.
- **Aerospace and aviation** – Hard-anodised aluminium has great lightweight properties and resistance to harsh environments. On aircraft, anodising also reduces maintenance needs and ensures a sleek finish.

Are you interested in learning more about aluminium anodising? Get in touch today. You can reach us using our [online contact form](#), or if you'd prefer to speak to our team directly, call us on [01202 677939](#). Browse our website to see the [full range of services](#) we offer.