



Anodising Brochure

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Barley Chaluk Limited, Ayton Road, Wymondham, Norfolk, NR18 0QH

Registered in England number: 923921

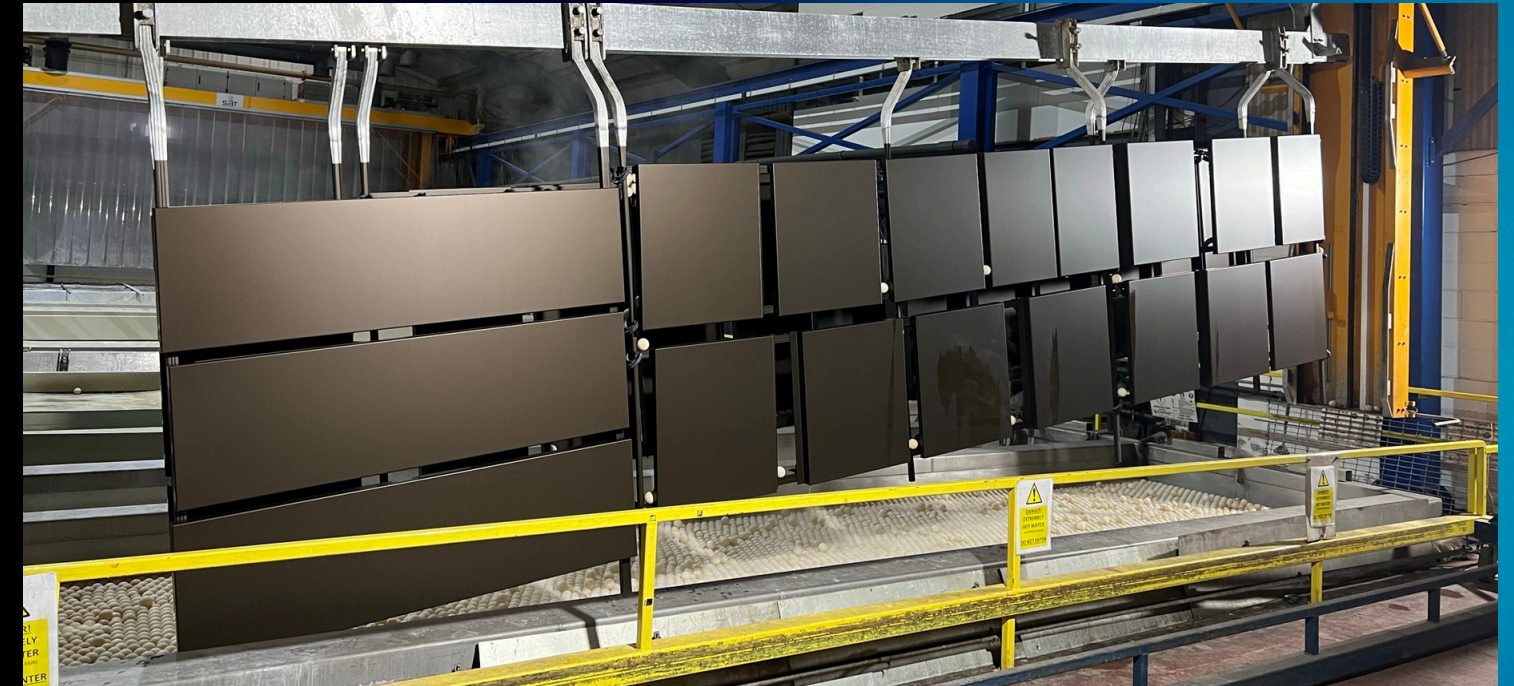
Excellent Finishing Quality

Barley Chalu prides itself on excellent finishing quality, attention to detail and its determination to provide its customers with the 'best in market' products.

Our high standards are achieved through compliance and strict adherence to our testing and control procedures in operation throughout the business.

All anodising products produced from our anodising department adhere to the standards set by QUALANOD's latest edition; a quality label committed to maintaining and promoting the quality of anodised aluminium. QUALANOD's specification conforms to ISO 7599.

Barley Chalu also conforms to the British Standard BS 3987:1991. BS 3987 provides a specification for anodic oxidation coating on wrought aluminium for external architectural applications. BSI is the UK's National Standards Body (NSB), who administers specifications that suppliers of materials must uphold, referring to recommended procedures, quality management and delivery of service and testing methods.



Barley Chalu offers a range of architectural anodised products:

Natural Anodising

(AA5, AA15, AA20, AA25)

Electrocolouring

Providing a range of 5 colour fast bronzes, from champagne to deep black. Our system also has the capacity to produce other colours on which we can advise.

Pre Anodising treatment (Powder Coating)

A superior surface pre-treatment for aluminium alloys providing excellent under paint protection.

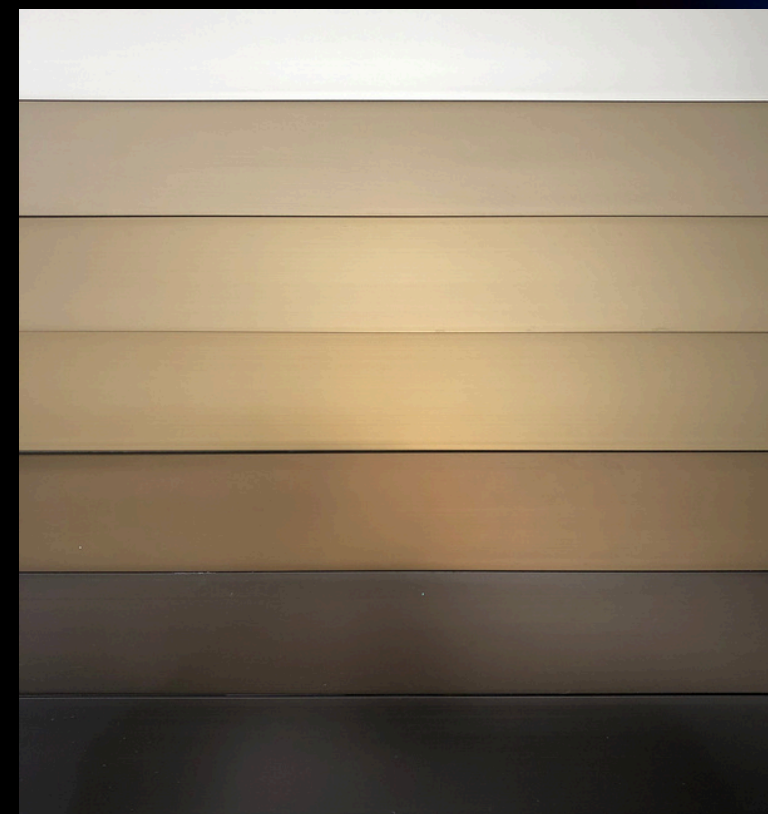
All products processed at Barley Chalu carry a 25 year Guarantee for standard use and location.

The Anodising Process

Sulphuric acid anodising (SAA) is the controlled oxidation of a clean aluminium surface which takes place in a sulphuric acid electrolyte. It is Barley Chalu's strict controls of this processing that results in our consistent high quality standards.

The resulting anodised layer is a porous film that can be likened to a honey-comb. After anodising the film is SEALED. There are several methods of blocking the anodic pores and at Barley Chalu we use a traditional Hot Water process producing and filling the pores with Böhemite.

Anodised and Sealed aluminium provides advantages, such as excellent corrosion resistance, a hard scratch resistant surface, increased strength and rigidity.



Natural

Pan31

Pan 32

Pan 33

Pan 334

Pan 34

Pan 35

We use an **Electrolytical Tin Colouring** process to colour the oxide film and can produce a range of colours, from light Bronze to a Deep Black. As we use an inorganic salt it displays excellent light fastness to UV light and heat degradation. Due to our methods of application, electrocolouring processed products conform to ISO 2135. Electrolytic colour anodising offers a highly durable finish for architectural application and this method is widely prevalent in the industry. This process also requires the use of hot sealing to close the pores.

Automated Plant

An individual treatment cycle for any bar or any type of product can be tailored to each customer and set to run and re-run whenever it is required. This digitally memorised cycle makes it possible to maximise the consistency of finished product. Using these cycles Barley Chalu is then able to create bespoke programmes for customers and change between them seamlessly.

When producing Electrocoloured material, the automated plant makes it possible to control voltage, thickness, current and the temperature; everything that is required to produce a consistent colour throughout large volumes of material. The Electrocolouring tank also possesses the ability to store recipes, this aids Barley Chalu in producing uniform coloured anodising on the same material, even when material from the same job may be staggered and received at different times.

Testing Methods

Standards

In accordance with Qualanod, Barley Chalu performs a variety of test methods specified by ISO 7599 (Anodising of aluminium and its alloys - Method for specifying decorative and protective anodic oxidation coatings on aluminium) (replaces BS 1615) and BS 3987:1991 (Specification for anodic oxidation coatings on wrought aluminium for external architectural applications). All test methods are used to ensure that the performance of the anodising production is of the highest standard.

Measurement of thickness

The thickness of the anodic oxidation coating is tested on every load using the method identified in ISO 2360 (Non-conductive coatings on non-magnetic electrically conductive base metals - Measurement of coating thickness - Amplitude-sensitive eddy-current method).



Testing Methods

Sealing tests

Mass Loss Testing is carried out using the ISO 3210 (Anodising of aluminium and its alloys - Assessment of quality of sealed anodic oxidation coatings by measurement of the loss of mass after immersion in acid solution(s)) method 2. This assesses the ability of the surface of an anodic oxidation coating to resist chemical attack by an acid.

Sealing quality is also tested using methods from ISO 2143 (Anodising of aluminium and its alloys - Estimation of loss of absorptive power of anodic oxidation coatings after sealing - Dye-spot test with prior acid treatment) and 2931 (Anodising of aluminium and its alloys - Assessment of quality of sealed anodic oxidation coatings by measurement of admittance).

Surface texture and colour

Using methods specified in ISO 7668 (Anodising of aluminium and its alloys - Measurement of specular reflectance and specular gloss of anodic oxidation coatings at angles of 20 degrees, 45 degrees, 60 degrees or 85 degrees) is used to continuously check surface texture.

Using methods of ISO 11664 (Colourimetry - Part 1: CIE standard colourimetric observers) for internal evaluation of the uniformity of colour. However, we conform to the agreed samples between Barley Chalu and the customer.



Resistance to wear/abrasion

The quality of the anodic oxidation coating is determined by the method stated in ISO 18771 (Anodising of aluminium and its alloys — Method to test the surface abrasion resistance using glass-coated abrasive paper), using glass-coated abrasive paper.

Fastness to light and ultraviolet radiation

Due to our methods of application of inorganic electro-colouring tin salt, the electrocolouring processed products conform to ISO 2135 (Anodising of aluminium and its alloys — Accelerated test of light fastness of coloured anodic oxidation coatings using artificial light).

Barley Chalu performs and adheres to all test methods mentioned above.

Barley
Chalu

Part
of

Panam
Chalu

Authorization to use the quality sign



This is to certify that

Barley Chalu Ltd

Ayton Road
UK – NR18 0QH Wymondham, Norfolk

Licence number: 1308

is authorized to use the quality sign which is shown above, according to the regulations for the use of the quality label for ARCHITECTURAL ANODIZING as described in the current edition of the Specifications for the QUALANOD quality label for sulfuric acid-based anodizing of aluminium (Edition 01.01.2026). Architectural anodizing is one of the four types of anodizing covered by the Specifications.

Date of issue of the licence:

12.02.2018

Period of validity of the licence:

until 31.12.2026

Date of issue of the certificate:

Zurich, 1 January 2026

QUALANOD

Peter Watts
President

Matthias Krämer
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