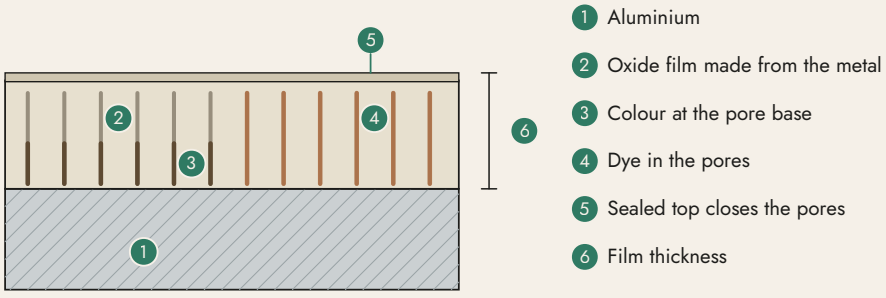
Anodising *aluminium*

What an anodic film is, how classes read in micrometres, why shades differ and what to write into a brief.

AT A GLANCE

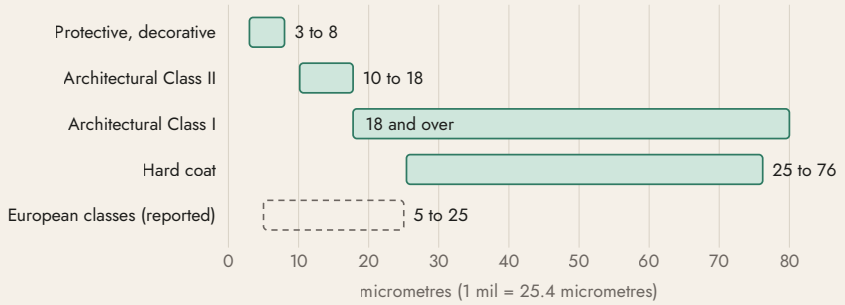
Class	Thickness (mil)	In micrometres	Use in the manual
Protective and decorative	0.1 to 0.3 mil minimum	3 to 8 micrometres	General class in the manual; not an architectural class
Architectural Class II	0.4 to 0.7 mil	about 10 to 18 micrometres	Interior items not subject to excessive wear; exterior items regularly cleaned and maintained
Architectural Class I	0.7 mil or more	about 18 micrometres and over	Interior items with normal wear; exterior items with minimal cleaning
Hard coat	1 to 3 mil	about 25 to 76 micrometres	Severe exposure or abrasion; special plant needed; enhances surface imperfections
European class numbers	Named by minimum average micrometres	5 to 25 reported	Secondary sources only; the standard and the Qualanod specification were not read

From the NAAMM Metal Finishes Manual (AMP 500-06, 2006, US), converted at 1 mil = 25.4 micrometres. BS EN ISO 7599:2018 and the Qualanod specification were not read.



Schematic: pores and film are drawn far thicker than real.

Section through an anodic film: pores, colour at the base of the pores or dye in them, and a sealed top. Schematic, pores and film drawn far thicker than real. Original drawing by Make Bespoke Studio.



Anodic coating classes on a micrometre scale from the NAAMM Metal Finishes Manual (2006); the dashed bar is the European class range reported by secondary sources. Original drawing by Make Bespoke Studio.

SPECIFICATION WORDING

ANODISED ALUMINIUM

Aluminium [alloy and temper, e.g. 6063 T5] anodised to [BS EN ISO 7599:2018], class [ ] with a minimum average film thickness of [ ] micrometres, measured by [eddy current] on every batch. Pre-treatment [etched / brushed / polished]. Colour method [clear / integral / electrolytic / dyed], matching approved sample [ref] within the range shown on [colour range samples of the production alloy]. Sealed [hot water / mid-temperature], seal quality tested by [test method and limit]. Anodiser [certified to the scheme named in the quote]; certificate and test results with each batch.

COLOUR AND VARIATION

All visible parts of [elevation or room] to be of the same alloy and, where possible, the same anodising batch. Welds [concealed / not permitted] on visible faces; filler [ ] agreed with the anodiser before welding. Joints between panels to be broken by [shadow gaps or divider strips]. Drainage and vent holes as [ ]. No non-aluminium parts fixed before anodising. Approve against [sample ref] before manufacture.

TERMS USED

Anodic film

A hard oxide layer made from the surface of aluminium in an acid bath, with pores that are sealed afterwards.

Seal

The step that closes the pores of an anodic film, usually in hot water or metal-salt solution, so it resists stain and corrosion.

Mil

One thousandth of an inch, equal to 25.4 micrometres; the unit used in US finishing documents.

Integral colour

Colour produced in the film by the alloy and the anodising process together, in the bronze to black range.

Structural streaking

Visible lines in anodised heavy sheet caused by the metal's internal structure, avoided by choosing specialty sheet.

STANDARDS AND SOURCES

- NAAMM/NOMMA Metal Finishes Manual AMP 500-06 (2006, US): Chapter 1 and Table 1-5 read 7 Nov 2026; US units.
- BS EN ISO 7599:2018: Listings: current; method for specifying decorative and protective anodic oxidation coatings. Not read.
- Qualanod specification: Certification scheme for sulphuric acid anodisers. Edition on request; not obtained.

Full guide: https://makebespoke.com/trade/technical/anodising-aluminium. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.