Alumet®
Reflect your vision

Anodizing specification 2025

Anodizing specification

Layer type	Aluminum oxide layer, Al2O3
Colour processes	Electrolytic or absorption processes, no organic pigments used
layer thickness	20 or 25 micrometer
Corrosion resistance	CASS testing is more effective than the AASS test for detecting defects in the anodic oxidation coating to produce a test result in a shorter time (8h for AA 5 to 72 h for AA 25). It is useful as a production control test
Temperature stability	No visible crazing shall be visible apparent on anodic oxidation coatings treated a metal temperature below 80 degrees Celsius. Tin-based finishes are stable at temperatures up to 250 to 300 degrees.
Fumigation	No fumes
Fire class	A1 non combustible
Hardness	Better than steel, (200-350 micro-Vickers ASTM-6507)
Wear resistance	Extremely high, (Taber < 30 mg 10,000 cycles)
Electrical resistance	High (4x10e15 Ohm.cm)
Light Reflectivity Value	Depends on mechanical pre-treatment, E6 AluNature: 78%
Solar Reflectance Index	Depends on colour; E6 AluNature: 91%
Light fastness	Extremely high (>8 ISO 2135)
Service life	More than 80 years from cradle to grave
Footprint in Euro	1,778 Euro per m2 (50% less than powdercoating standard class 2. (3,606 Euro per m2). Life Cycle Assesment (LCA) / Environmental product declaration (EPD). *Report on request*

Material of profiles

Aluminium alloy (NEN-EN 573-3-09): EN-AW 6060 (AlMgSi0.5) or (NEN-EN 573-3-09): EN-AW 6063 (AlMgSi0.7) The profiles should be obtained from 1 supplier wherever possible, in order to minimise differences in alloys. Different alloys need to be submitted to the anodizing company for approval and guarantee. We advise to mechanically pre-treat extrusions without a thermal-break, which are joined after anodizing. We advise to anodize extrusions without thermal breaks for all colour anodizing to obtain and guarantee the best colour uniformity. We do not accept profiles with thermal-break for the colours AluGrey, AluBlue and AluGreen. Join with thermal-break after anodizing!

Material of sheeting and expanded metal

Sheet	(NEN-EN 573-3-09): EN-AW 5005 (AlMg1), EQ or AQ (anodizing Quality)
Expended metal	aluminium alloy (NEN-EN 573-3-09): EN-AW 1050 (Al99.5), EQ or AQ (anodizing Quality)

The materials should be obtained from 1 cast batch from 1 supplier.

E2	Mechanical pre-treatments brushing E2 cannot be done on sheet material. We advise to use a brand which is pre-brushed from the mill on 2mm or 3 mm sheets. *Please contact our sales department for more information*.
E5	Mechanical pre-treatment polishing can only be done on flat sheets.
E6	Matt etching has no specific requirements other than all the material coming from 1 batch and 1 supplier.
E7	Chemical brightening E7 works best on J57S from Novelis, other brands have less gloss.
E8	Mechanical pre-treatment polishing (then brightening) only works on flat sheet or Alucobond.
E9	Mechanical pre-treatment blasting can be done on flat sheets and folded sheets, please contact our customer service department for options.
E10	Mechanical pre-treatment blasting then brightening can be done on flat sheet and folded sheet. The brightening works best on J57S from Novelis.
E12	Mechenical pre-treatment brushing followed by chemical brightening.

Pre-treatments

Coding	Pre-treatment	
E2	Brushing	Light grinding and brushing, visible brush marks
E4	Grinding + brushing	Grinding and brushing, shiny, small brush marks
E5	Grinding + polishing	Light grinding and polishing, smooth shiny surface
E6	Chemical etching	Matt surface (standard pre-treatment)
E7	Chemical brightening	Shiny surface
E8	Polishing + chemical bright	Smooth bright surface (profile)
E9	Blasting + chemical bright	Shiny sparkle effect surface
E10	Blasting + matt etching	Smooth ultra-mat surface

Note: Mechanical pre-treatments can only be done on non-isolated profiles (isolator afterwards) and flat (or composite) sheet, see paragraph materials.

Anodizing

anodizing is an electrochemical process which converts the metal surface into a decorative, durable, corrosion-resistant, wear-resistant oxide layer. This aluminium oxide is not applied to the surface like coating or plating, but is fully integrated with the underlying aluminium substrate. This means it cannot chip or peel. It has a highly ordered, porous structure which allows for secondary processes such as colouring. Our anodizing layers meet all the quality standards for outdoor use, such as QUALANOD and BS 3987. All colours displayed are extremely durable, UV resistant and suitable for outdoor applications.

Coding	Layer thickness	
AA20	20 micron,	Outdoor use (standard outdoor use)
AA25	20 micron,	outdoor use (industrial/coastal area or BS)

Coding	Colour	Alternative code according to EURAS
AluNature	Natural	C0
AluGold00	New Silver	
AluGold01	Champagne – light gold	
AluGold02	Gold (VOM2)	
AluGold03	Dark gold (VOM3)	
AluCopper01	Orange – light copper	
AluCopper02	Medium light copper	
AluCopper03	Medium dark copper	
AluCopper04	Dark copper	
AluOldCopper01	Light brown	
AluOldCopper02	Chocolate brown	
AluOldCopper03	Dark chocolate brown	
AluRed01	Pink – light red	
AluRed02	Medium light red	
AluRed03	Medium dark red	
AluRed04	Dark cardinal red	
AluBrass01	Light brown brass	
AluBrass02	Medium light brown brass	
AluBrass03	Medium dark brown brass	
AluBrass04	Dark brown brass	
AluBronze01	Titanium - light bronze	C31
AluBronze02	Medium - light bronze	C32
AluBronze03	Medium bronze	C33
AluBronze335	Medium – dark bronze	
AluBronze04	Dark bronze	C34
AluBlack	Black	C35
AluBlue	Dark blue	
AluGreen	Dark green	
AluGrey00	Stone Grey (Anolok II Stone Grey)	
AluGrey01	Zinc Grey (Anolok II 711)	
AluGrey02	Steel Grey (Anolok II 713	
AluGrey03	Dark Grey (Anolok II 715)	
AluGrey04	Anthracite dark grey (Anolok II 717)	

Example specification anodizing code for brightened gold anodized products: E7 – A20 – AluGold01

Note: We strongly advise to use extrusions without thermal-breaks for the colours AluGrey, AluBlue and AluGreen. Join the two parts with thermal-break after anodizing. This is the same procedure as coating in Bi-colour, one colour on the inside and one colour and on the outside of a window.

Important generic notes for specifiers

Always use a QUALANOD certified company to anodize facades, Alumet is certified since 1976 and can also anodize according to BS 3987.

All colours should be suitable for outside applications according to ISO 2135:2010, lightfastness of 8 or higher. Therefore, Alumet uses only electrolytic colouration or impregnation colouring with metal salts (no organic pigments).

Guarantee period needs to be guaranteed by the anodizing company. In case of Alumet, all finishes come with 20 (QUALANOD) or 40 year (BS3987) warranty.

Dimensions for anodizing: 7500 mm x 1800 mm x 250/750 mm (depending on colour chosen), Dimensions for mechanical pre-treatment: 7500 mm x 1500 mm x 250 mm (sheets only flat)

If the sheeting is welded, then the welding wire must be made of an alloy containing less than 5% Si, so that the weld will match the colour of the aluminium that is used. AlMg5 or USAS 5356 is preferable.

The limits for colour anodization need to be set based on the material that is to be used and must be submitted to the architect or client for approval. Limits on profiles and sheet will slightly differentiate.

In order to produce within small boundary limits, we advise to anodize non isolated profiles. After anodizing the two separate profiles can be joined. This way we have better electrical contact. For some colours (AluGrey, AluBlue and AluGreen) this is compulsory (same as Bi-colour procedure when 2 colours on a window as ordered).

In order to mechanically pre-treat profiles, we advise to process non isolated profiles. After mechanical pre-treatment and anodizing the two separate profiles can be joined. This way we can use the machine to cover all sides with the highest quality (same as Bi-colour procedure, when 2 colours are ordered).

The sheeting should be produced from 1 casting batch wherever possible, in order to minimise differences in alloy. The alloy and brand that are selected need to be submitted to the anodizing company for approval and guarantee.

Sheeting must be used in such a way that the rolling direction of the plate is uniform (PS The use of sheeting with a non-uniform rolling direction will result in a difference in reflection and therefore an optical colour difference, as the anodizing layer is transparent).

Electrical contacts that will remain visible after installation need to be fitted on the non-visible side, or in consultation with the architect or client. (PS Contact points and saw cuts or drilling holes do not affect the quality of the adjacent anodizing layer).

In order to produce within small range samples, it is also advisable to produce large lots (facades) in 1 production run. Especially villas, houses or small projects are advisable to produce in 1 production run. This is applicable for sheets, folded sheets and profiles.