

OX-A Natural Anodizing

OX-A is a natural aluminium anodizing treatment in conformity with MIL-A-8625 Type II and ISO 7599 standards.



CORROSION RESISTANCE

The OX-A layer protects the base material from corrosion withstanding 336 hours of exposure to salt mist according to the requirements of the MIL-A-8625 standard.

SEALING

The “hot sealing”, carried out in hot water without the use of heavy metals, allows to increase the resistance to corrosion and improve the resistance to stains and discolorations.

RESISTANCE TO WEAR AND SCRATCHES

The aluminium oxide layer formed by the OX-A treatment permits obtaining resistance to scratches and light-wear phenomena.

CHEAPER

Compared to other aluminium anodizing treatments, it is cheaper thanks to the high efficiency of the process.

OX-AN BLACK COLOUR VARIANT

The OX-A treatment can be pigmented deep black, thereby making the colour uniform on all aluminium alloys.

OX-A-PTFE LOW-FRICTION VARIANT

To lower the friction coefficient and provide anti-adhesion properties, the OX-A treatment can be impregnated with PTFE nanoparticles.

SPECIFICHE TECNICHE

COMPOSITION

The OX-A treatment transforms base aluminium into a compact layer of aluminium oxide. The composition largely depends on the initial alloy.

Al	O	S	Impurities
20-40%	50-70%	3-5%	Depending on alloy

APPLICABLE STANDARDS

PRODUCT TECHNICAL STANDARDS

ISO 7599 MIL-A-8625 | Type II

ROHS CONFORMITY

✓ RoHS conform.

No restricted-use substances beyond maximum tolerated concentrations.

REACH CONFORMITY

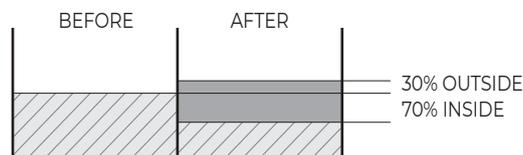
✓ REACH conform. No SVHC in quantities greater than 0.1% by weight.

ANODIZABLE ALLOYS

WROUGHT ALLOYS	CORROSION RESISTANCE	MAX THICKNESS
Containing high % of copper and zinc	★ ★ ★ ☆ ☆	★ ★ ★ ★ ☆
Other alloys	★ ★ ★ ★ ★	★ ★ ★ ★ ★
CASTING ALLOYS		
Alloys with Si>8% or Cu>2%	★ ☆ ☆ ☆ ☆	★ ☆ ☆ ☆ ☆
Die-casts with Si<8% or Cu<2%	★ ★ ☆ ☆ ☆	★ ☆ ☆ ☆ ☆
Other alloys	★ ★ ★ ☆ ☆	★ ★ ★ ☆ ☆

COATING THICKNESS

STANDARD THICKNESS	TOLERANCE
15 µm	± 5 µm
Uniform thickness over the entire external surface. Reduced thickness in holes.	
<p>Treatment thickness grows 30% outside and 70% inside the surface of the aluminium piece. The radial dimensional increase is therefore equal to 30% of the treatment thickness.</p>	



AESTHETIC APPEARANCE

Semi-gloss appearance with light grey colour. The colour tone depends on the base alloy and treatment thickness. Morphology is similar to the machined piece.
 Black colour option in **OX-AN** version.

WEAR RESISTANCE

Resistance to light wear and scratches.
 In case of greater need, the OX-HS and OX-W treatments permit to obtain very high wear resistance.

FRICTION COEFFICIENT

The OX-A-PTFE variant consists of an impregnation treatment of the anodizing layer with PTFE nanometric particles. This impregnation permits obtaining a non-adhesion, self-lubricating surface with low friction coefficient.

CORROSION RESISTANCE

The OX-A treatment permits obtaining high resistance to corrosion and oxidization. It passes the resistance requirements of the accelerated corrosion test in salt mist according to the MIL-A-8625F Type II standard.

CORROSION RESISTANCE VALUE	BASE MATERIAL
 ≥336 hours	Alloy 6000
NSS ACCORDING TO MIL-A-8625F 3.7.1.2	

CHEMICAL RESISTANCE

Approximate values of compatibility with the coating environment.
The actual resistance to the environment must in any case be tested in the field.

- ✓ Hydrocarbons (e.g. petrol, diesel fuel, mineral oil, toluene)
- ✓ Alcohols, ketones (e.g. ethanol, methanol, acetone)
- ✓ Neutral saline solutions (e.g. sodium chloride, magnesium chloride, brine)
- ✗ Diluted reducing acids (e.g. citric acid, oxalic acid)
- ✗ Oxidizing acids (e.g. nitric acid)
- ✗ Concentrated acids (e.g. sulphuric acid, hydrochloric acid)
- ✗ Diluted bases (e.g. diluted sodium hydroxide)
- ✗ Oxidizing bases (e.g. sodium hypochlorite)
- ✗ Concentrated bases (e.g. concentrated sodium hydroxide)

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