

## 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.

### COLOURED VARIANT, BLACK AND BLUE

**OX-AN:** deep black dye that allows to uniform the color in presence of different alloys.

**OX-AB:** blu dye that allows to uniform the color in presence of different 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

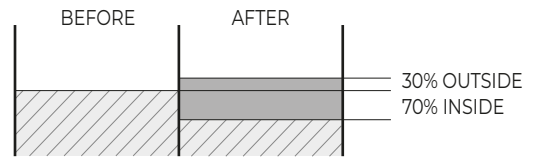
WROUGHT ALLOYS	CORROSION RESISTANCE	MAX THICKNESS
Containing high % of copper and zinc	★ ★ ★ ☆ ☆	★ ★ ★ ★ ☆
Other alloys	★ ★ ★ ★ ★	★ ★ ★ ★ ★
CASTING ALLOYS		
Alloys with Si>8% or Cu>2%	★ ☆ ☆ ☆ ☆	★ ☆ ☆ ☆ ☆
Die-casts with Si<8% or Cu<2%	★ ★ ☆ ☆ ☆	★ ☆ ☆ ☆ ☆
Other alloys	★ ★ ★ ☆ ☆	★ ★ ★ ☆ ☆

## COATING THICKNESS

STANDARD THICKNESS	TOLERANCE
15 µm	± 5 µm

Uniform thickness over the entire external surface. Reduced thickness in holes.

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.



## 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
<div style="background-color: #4a7ebb; width: 100px; height: 15px; display: inline-block;"></div> ≥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)

### DUROX SRL

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