



recommendations for the **Corrosion protection**



for aluminium in the field of architectural applications



the

global

standard

for

architectural

aluminium

finishing

recommendations for
corrosion protection

**for aluminium in the field of architectural
applications**

QUALICOAT's Specifications give requirements for material quality, the pretreatment and the coating process and define the performance of the organic coating.

The following recommendations for corrosion protection are focusing on the combination of environmental conditions and the QUALICOAT Specifications to achieve a long-term performance of the coated aluminium, also taking the work of architects and specifiers into account.

Technical Information Sheet No. 4

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The following 'Corrosion Table' demonstrates possible combinations of material quality, different types of pretreatments and environmental description according to international standards, which are leading to our recommendations. The grade of recommendation is sectioned into R (recommended), HR (highly recommended) NR (not recommended), and A (alternative, although technically not necessary).

The recommendations in the following table are referring to the examples of typical environments stated in ISO 9223:2012 Table C.1 and ISO 18768-1:2022, also with references to costal areas and areas with strong effect of de-icing salt on the basis of a 1-layer-coating system.. Other applications with strong effects of chlorides, e.g. swimming pools, can be classified accordingly.

The following treatments or conditions may improve the corrosion resistance:

- **Regular cleaning according QUALICOAT Technical Information Sheet No. 1 'Recommendations for care of coated aluminium'**
- **Application of 2-layer-coating systems according QUALICOAT-Specifications (Primer + Finish) to improve the covering of edge radius**
- **Watertight construction, sealing of machined surfaces (after coating) and/or good ventilation and draining of façade elements.**

The following treatments or conditions will decrease the corrosion resistance and cannot be influenced by the pretreatment and powder coating process:

- **Damaged coating film, e.g. by scratches, tools or post-treatment**
- **Contact/galvanic corrosion with other materials**
- **Dirt load, e.g. at connections/inside corners**
- **Sharp edges with edge radius < 0.5 mm and burrs**
- **Stray electrical currents**
- **No watertight construction, no sealing of machined surfaces (after coating) and bad ventilation and draining of façade elements.**

Corrosivity Categories

According to
ISO 18768-1:2022 Table 1
ISO 9223:2012 Table C.1

Pretreatment

On different material
qualities

Material Quality	6060 6063			QCT 3.0*	
	Chemical		Pre- Anodising	Chemical	Pre- Anodising
Pretreatment Type	1 g/m ²	2 g/m ²	2 g/m ²	2 g/m ²	2 g/m ²
C1 + C2	R	A	A	R	A
C3	NR	R	R	R	R
C4	NR	R	HR	R	HR
C5	NR	R	HR	R	HR
CX	NR	NR	HR	NR	HR

* Etching degree of 2 g/m² is mandatory for QCT 3.0

Corrosion Table with recommendations:

R = recommended
HR = highly recommended
NR = not recommended
A = Alternative (improved corrosion protection, technically not necessary)

Note: For cast accessories see Appendix A5 of QUALICOAT Specifications.



AAG NPC
Greece



Aluminium Association of Greece

A41-43 Michalakopoulou str.
GR-115 28 Athens

TEL +30 210 72 56 130-2
WEBSITE www.aluminium.org.gr



AYID
Turkey



Alüminyum Yüzey İşlem Derneği

Şemsettin Günlaltay Caddesi Serhan Apt.
193/5, Erenköy - Kadıköy
TR - 34738 İstanbul

TEL +90 216 386 16 85
WEBSITE www.ayid.org.tr



AEA
Spain



**Asociación Española del Aluminio
y Tratamientos de Superficie**

Príncipe de Vergara, 74 – 3ª
ES - 28006 Madrid

TEL +34 914 112 791
WEBSITE www.asoc-aluminio.es



**QUALICOAT
FRANCE**
France



QUALICOAT France

17 rue de l'amiral Hamelin
FR - 75116 Paris

TEL +33 01 42 25 26 44
WEBSITE www.qualicoat.fr



AFMSZ
Hungary



**Hungarian Aluminium Surface Treaters'
Association**

Népfürdő u. 19/A. I/4.
HU - 1138 Budapest

TEL +36 30 9590575
WEBSITE www.afmsz.hu



QUALICOAT Schweiz
Switzerland



QUALICOAT Schweiz

Tödistr. 42
Postfach
CH - 8027 Zürich

TEL +41 43 305 09 81
WEBSITE www.qualicoat.ch



AMELAQ
Mexico



AMELAQ

Francisco I. Madero 146
San Esteban, Naucalpan MX - 53550
Estado de Mexico

TEL +52 555 1083-5092
WEBSITE www.amelaq.org



**QUALICOAT UK
& Ireland**
UK & Ireland



**QUALICOAT UK & Ireland c/o
Aluminium Federation Ltd.**

Bragborough Hall Business Centre,
Welton Road, Braunston, Daventry,
Northamptonshire NN11 7JG

TEL +44 (0) 333 240 9735
WEBSITE www.qualicoatuki.org



APAL
Portugal



APAL - Associação Portuguesa do Alumínio

R. Cons. Luís de Magalhães
N.º 46-1.º Andar- Sala B-2
Apartado 287
PT - 3811-901 Aveiro

TEL +351 234 42 22 41
WEBSITE www.apal.pt



QUALIPOL
Poland



QUALIPOL

Stowarzyszenie Wykonawców Obróbki Powierzchni
Metalowych ul. Sępia 22
PL-04-512 Warsaw

TEL +48 500 579 089
WEBSITE www.qualipol.pl



QUALISINO
CHINA



QUALISINO

Room 501, Building 25, 189 Hongcan Road
Xiaoshan Economic & Technological
Development Zone
CN - 311232 Hangzhou City, P.R. China

TEL +86 571 8286 5811
WEBSITE www.qualisino.com



QUALI MIDDLE EAST
Bahrain, Egypt, Kuwait, Oman, Qatar,
Saudi Arabia, United Arab Emirates



QUALI MIDDLE EAST ASSOCIATION

c/o Dubai Association Center
Office No. 207 (16), Level 2, Building 2 at One Central
Dubai World Trade Centre
P.O. Box 23070, Dubai-UAE

TEL +971 4 516 3052
WEBSITE www.qualimiddleeast.com



QUALITAL
Italy



QUALITAL - ISTITUTO DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO E ALTRI MATERIALI

Strada Priv. Ragni Meloni, 13/15
IT - 28062 Cameri (No)

TEL +39 0321 1828 222
WEBSITE www.qualital.eu



VOA
Germany



Verband für die Oberflächenveredelung von Aluminium e.V.

Max-Joseph-Str. 5
DE - 80333 München

TEL +49 (0) 89 55 17 86 70
WEBSITE www.voa.de



QUALUBEL
Belgium



QUALUBEL

Chemin des Soeurs 7 Nodebais
BE - 1320 Beauvechain

TEL +32 473 451 263 (MOBILE)
WEBSITE www.qualubel.be



Qual.ION
Netherlands



Vereniging Qual.ION

Postbus 2600
NL - 3430 GA Nieuwegein

TEL +31 30 630 03 90
WEBSITE www.vereniging-ion.nl/qualion

the **global**
standard for architectural
aluminium coatings

QUALICOAT

Certification Body

OFFICE:

Tödistrasse 48
CH-8002 Zurich

TEL: +41 44 515 98 40

GENERAL INFORMATION

info@qualicoat.net

ACCOUNTING

accounting@qualicoat.net

QUALIDECO

qdc@qualicoat.net

COATERS

coaters@qualicoat.net

POWDERS

powders@qualicoat.net

PRETREATMENT

pretreatment@qualicoat.net

www.qualicoat.net



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