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Certification of sublimation coating technique

The following coating products used by Silap using Decoral technology, comply to QUALICOAT and GSB certifications:

Coating product series	QUALICOAT approval	GSB approval
BOxxx	P-0506	PUR TRAC, Beige e Brown 228a
BRxxx	P-0617	-

In detail, the chapters of the specifications that are satisfied are:

From QUALICOAT specification

- Acetic acid salt spray resistance (**ISO 9227** page 13 of QUALICOAT 12ed. specification)
- Machu test (page 13 of QUALICOAT 12ed. specification)
- Resistance to humid atmospheres containing sulfur dioxide (**EN ISO 3231** page 12 of QUALICOAT 12ed. speficification)
- Mortar test (**EN 12206-1** page 16 of QUALICOAT 12ed. specification)
- Boiling water test (page 17 of QUALICOAT 12ed. specification)
- Resistance to Moisture (**EN ISO 6270-2** page 17 of QUALICOAT 12ed. specification)

From GSB specification

- Condensation Atmosphere with Constant Humidity (**DIN EN ISO 6270-2** page 44 del GSB AL 631 ed.2012)
- Humidity Atmosphere containing Sulphur Dioxide (**DIN EN ISO 3231** page 44 del GSB AL 631 ed.2012)
- Acetic Acid Salt Spray (**ISO 9227** page 44 del GSB AL 631 ed.2012)
- Filiform Corrosion Test (**DIN EN 3665** page 44 del GSB AL 631 ed.2012)
- Boiling Water or Pressure Cooker Test (page 45 del GSB AL 631 ed.2012)
- Resistance to Moisture (page 45 del GSB AL 631 ed.2012)
- Mortar test (page 46 del GSB AL 631 ed.2012)

For more information you can ask for individual certificates above mentioned to e-mail address **sales@silap.com**.

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Laboratory tests on accelerated aging

Introduction

Considering the QUALICOAT and QUALIDECO specifications regarding this type of test, each sample is subjected to radiation from xenon lamps and wet / dry cycling using special equipment, which also allow us to simulate, in addition to sun exposure, even to atmospheric agents.

Terms of test execution

These equipments are used in accordance with international standard ISO 11341 according to the following settings:

Light intensity	550 ± 20 W/m^2 (290-800 nm)
Black panel temperature	65 ± 5 °C
Wet cycle (radiation + weathering simulation)	18 minutes
Dry cycle (only radiation)	102 minutes

Summary

At the end of the test, which normally have a lifetime of about 1000 hours, it is evaluated the brilliance change (**EN ISO 2813**, with an incident angle 60 °) and the color change ΔE (using the CIELAB method according to **ISO 7724/3**) compared to reference values.

This system allows to establish, in a parameterized way, the aging of the various tested surfaces.

The correct performance of the tests is verified using samples with known aging.

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Examples of samples tested

Below there are some examples of samples tested according to what described previously. The highlighted rectangle identifies the area of the sample that has been subjected to accelerated aging.

As can be seen from the figure below, the color variation is almost imperceptible in the two samples decorated using sublimation film compared to the first which has been treated with standard a powder paint.

STANDARD POWDER PAINT	SUBLIMATIC FILM DECORATION	PLOTTER PRINT USING GRAFFITI-PROOF INK