

**Object:**

**Colour change after mortar test for metallic powder coatings**

**Proposal**

**«Powders» WG and Technical Committee.**

**QUALICOAT resolution:**

**Meeting on 21.06.07**  
(ratified on 21.11.07)

**Date of application:**

**1 April 2008**

**Amendments to the Specifications:**

- **Section 2.15**
- **Revised Appendix A4 with new title “Metallic powder coatings”**

## **2.15 Resistance to mortar**

The test must be performed according to the EN 12206-1 (paragraph 5.9) standard.

### **REQUIREMENTS:**

The mortar must be easy to remove without leaving any residues. Any mechanical damage to the coating caused by grains of sand should be disregarded.

Any change in the appearance/colour of metallic coatings must not exceed 1 on the reference scale (see Appendix A4).

All other colours must not show any change.

**Revised Appendix A4 : see following pages**

## A4 – Metallic powder coatings

### 1. DEFINITION

Metallic powder coatings are powder coatings with a metallic or metallized effect. A metallic powder coating is a "normal" powder coating, the difference is the pigmentation. Powder manufacturers achieve this special effect by incorporating metal (for example: leafing or non-leafing aluminium) or other materials (for example: mica) in the formulation of the powder.

We can separate metallic powder coatings into two categories:

- One-coat systems with a metallized appearance (no clear coat is needed for good outdoor durability and resistance). **The current approvals are sufficient.**
- Two-coat systems: metallic powder coatings that need a clear coat in order to have acceptable weathering resistance. **These specific two-coat systems must be approved separately by QUALICOAT.**

*The powder manufacturers are responsible for advising their customers whether they need to use a two-coat system or not.*

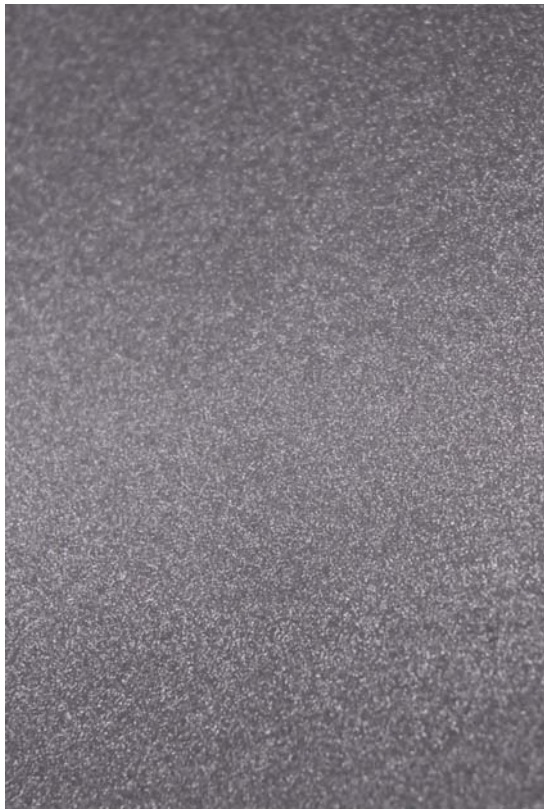
### 2. REFERENCE SCALE

Some metallic colours, especially those based on aluminium, may show variations in colour during tests that affect the surface of the coating. In this case, QUALICOAT accepts a slight variation in colour. In the case of metallic colours, the colour variations may differ depending on the angle of observation. This makes it difficult to perform a reliable measurement using any of the apparatus defined in the standard mentioned in section 2.12 of the Specifications.

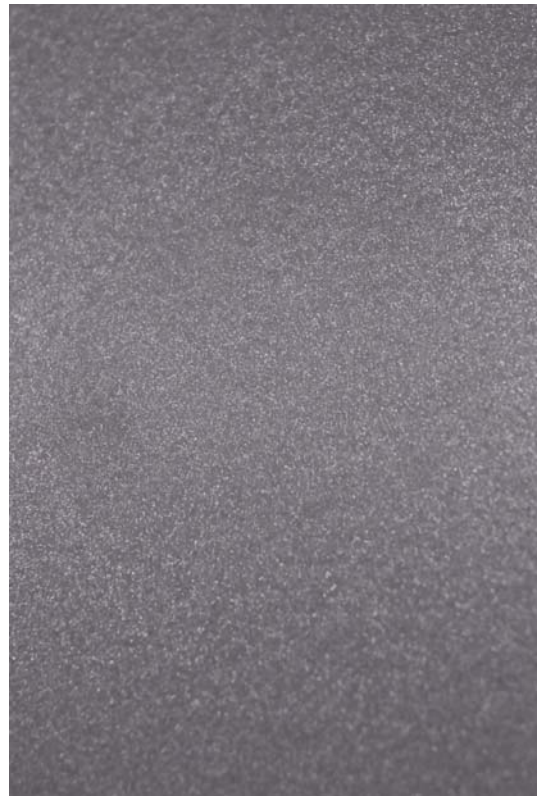
For this reason, a reference scale for the laboratories has been defined using panels coated in an aluminium-based metallic colour (RAL 9006). The stains are obtained by applying an alkaline solution to the surface for different lengths of time. These different panels produced by an approved laboratory are approved and distributed by QUALICOAT. Each approved laboratory must have these reference panels.

For information, the following photographs show values 1 and 2 on the reference scale.

**REFERENCE FOR EVALUATING MORTAR TEST RESULTS**  
**(FOR INFORMATION)**



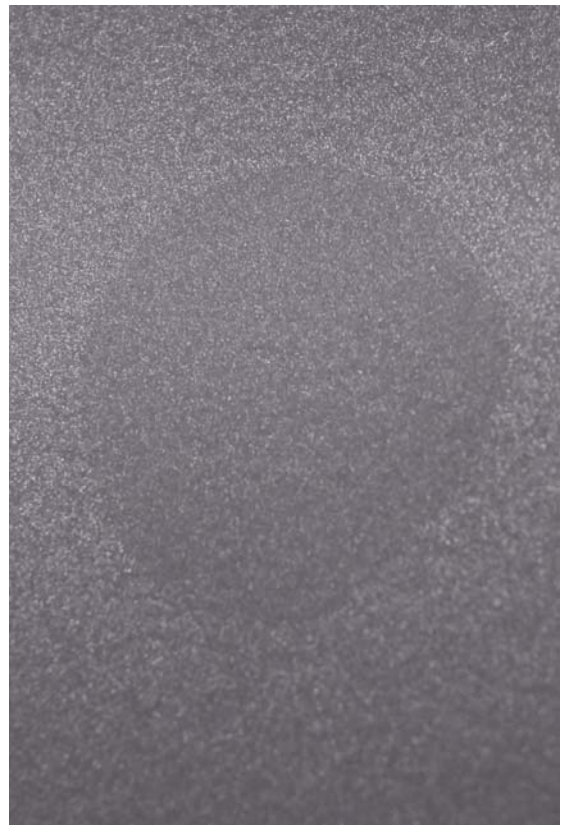
Acceptable value 1



Acceptable value 1



Unacceptable value 2



Unacceptable value 2