

**SEAL TEST FOR ANODISED ALUMINUM**

**Application**

This test method is used to determine whether an anodic coating on aluminum has been properly sealed. This method is applicable to steam sealed or water sealed anodised aluminum. In case of dispute the referee method shall be weight loss determination by test method EU AQ 6-3.

**Apparatus and Reagents (of recognised analytical quality) Required**

**Dye Test Solution**

Dissolve 5 g Aluminum Blue 2 LW in 1 litre of distilled water, adjust to pH 5.0 +/- 0.5 with diluted sulphuric acid or sodium hydroxide solution at a temperature of 25 +/- 1 °C.

**Sulphuric Acid - Potassium Fluoride Solution**

Add 10 g potassium fluoride and 25 mL sulphuric acid (specific gravity 1.84) to 1 litre of distilled water.

**Cotton Plugs**

**Acetone**

**Conditioning and Test Conditions**

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

**Procedure**

1. Clean the surface to be tested and remove any grease with acetone on cotton wool.
2. Apply one drop of sulphuric acid - potassium fluoride solution at a temperature of 25 +/- 1 °C to the horizontal clean and dry surface and allow to remain for exactly one minute before removing. Then thoroughly rinse, wipe with soft paper tissues and forced air dry (oil and water free) the surface.
3. Apply the dye test solution at a temperature of 25 +/- 1 °C to the pretreated test area. Let the dyestuff remain on the surface for one minute, then clean the surface thoroughly by rubbing under running water with a paste of light abrasive (magnesia or whiting or equivalent abrasive medium) for approx two minutes. Then thoroughly rinse and forced-air dry (oil and water free) the surface.

**Evaluation**

Examine and compare intensity of stain in test area with the standard colour table and rate according to resistance to dye absorption.

| Date       | Action | Revisions                                  |
|------------|--------|--------------------------------------------|
| 2000 11 08 |        | Editorial – no technical change A. Cockman |
| 1994 02 28 |        |                                            |

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**Standard Colour Table**

| ALUMINUM<br>BLUE 2LW | INTENSITY OF<br>THE STAIN | RESISTANCE TO<br>DYE ABSORPTION |
|----------------------|---------------------------|---------------------------------|
| *                    | 5                         | NONE                            |
| *                    | 4                         | VERY WEAK                       |
| *                    | 3                         | WEAK                            |
| *                    | 2                         | MEDIUM                          |
| *                    | 1                         | STRONG                          |
| *                    | 0                         | TOTAL                           |

\* Original color chips are available from:

Materials Laboratory 13/100  
Research and Engineering Centre  
Ford Motor Company Ltd.  
Laindon, Basildon  
Essex SS15 6EE, England

**Source of Dye Stuff**

Great Britain: Sandoz Products Ltd.  
P.O. Box 4  
Horsforth  
Leeds LS18 4RP

Germany: Sandoz Producte  
Wiesental Strasse 27  
Postfach 2280  
D 7850 Lörrach

Spain: Sandoz S.A.E.  
Avda. Jose Antonio  
Primo de Rivera 764/768  
Aptdo. 708  
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