

**DETERMINATION OF THE SPECIFIC DENSITY OF SOLID
CONTENT OF BAKED ENAMELS AND PRIMER FILMS**

Application

This test method is used to determine the specific density of solid content of enamel and primer films baked under production conditions.

Apparatus Required

Spray Cabinet, Spray Gun, Air Convection Oven

According to BI 103-02

Analytical Balance

+/- 0.1 mg with equipment for measuring specific density.

Thickness Gauge

According to BI 117-01

Beaker

Aluminum Foil

Thickness: max 60 micrometre (Method A) (commercial)
 40 - 60 micrometre (Method B) (commercial)

Wire

0.1 mm ϕ

Panels

Steel body skin panels 75 x 230 mm

Distilled Water

Tape

Heat resistant

Wetting Agent

Date	Action	Revisions
2001 03 13	Revised	Editorial – no technical change A. Cockman
1994 02 28		

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Caustic Soda
10 %

Protective Goggles

Forceps

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

A-1 Preparation of the Baked Film (inert to caustic soda)

1. The paint must be reduced to the proper spraying viscosity with the appropriate thinner as designated by the material specification. Viscosity is measured in accordance with FLTM BI 111-01.
2. Tape on to three panels aluminum foil 40 x 40 mm to 60 x 60 mm.
3. Spray and bake the assemblies according to FLTM BI 103-02, Method E.

Note: If different curing cycles, e.g. "standard and overbake" are required, three assemblies each must be prepared.

4. After cooling to 23 +/- 2 °C separate the painted aluminum foil from the panels.
5. Dissolve the aluminum foil from the paint film by immersion into caustic soda solution under a fume hood. This procedure will be accelerated by heating the caustic soda to 50 °C max. (Do not use a flame.)

CAUTION: Wear goggles.

6. Remove the paint film after complete removal of aluminum from the caustic soda solution, rinse with distilled water and blot dry, final drying for 20 minutes at 45 °C in the oven.