

STAINING AND SOFTENING OF PAINTED SURFACES BY RUST PREVENTIVE COMPOUNDS

Application

This procedure is used to determine the tendency for rust preventive compounds, used in exterior or interior automotive applications, to stain or soften painted surfaces that are exposed to heat and/or sunlight.

Apparatus Required

Oven

Approximate internal dimensions: 725 mm wide, 610 mm deep, and 520 mm high capable of maintaining a temperature of 45 +/- 2 °C. The oven is to be equipped with thermostat control and a red pilot light. A Grieves-Henry oven (Model CR-326, Model PL-1) or equivalent is suitable.

Fluorescent Sunlamp Cabinet

Modified oven as shown above equipped with sunlamp fixture shown below.

Sunlamp Fixture - #PL-326* or equivalent

To be completely installed in the oven. 20 gauge steel box with screw cover; two 20 watt high power-factor ballasts; 4 fluorescent starter assemblies; 4 pairs fluorescent lamp holders; 4 FS 20T-12 fluorescent sunlamps.

*Source:

Infra Corporation
5454 Dixie Highway
Waterford, MI 48239-1615
Telephone: (248) 623-0400

Thickness Gage

A Gardner or equivalent wet film thickness gage.

Source: VWR Scientific (Catalog No. 52625-001)

Microhardness Tester

Tukon hardness tester or equivalent.

Date	Action	Revisions
2001 07 25	Revised	Editorial – no technical change A. Cockman
1996 06 05		

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Materials Required

Cloth

Shall be suitable for wiping rust preventive from a painted panel.

Test Panel

Refer to FLTM BI 103-02, Method B,2 or as specified in the applicable material specification. The panel(s) shall be freshly painted within 72 hours of initiating testing using and baked to the minimum requirements of the current production white topcoat enamel.

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. Check the microhardness of the painted surface(s) before test exposure per FLTM BI 112-02.
2. Apply rust preventive compound on current production white, base/clear coat enamel, painted panels (or base/clearcoat enamel as referenced in the rust preventive specification).
3. Expose one panel in the fluorescent sunlamp cabinet at 45 +/- 2 °C for 16 hours. Expose a second panel in oven only at 45 +/- 2 °C for 16 hours.
4. After exposure, remove the rust preventive from the panel with a soft cloth saturated with a suitable solvent.
5. Check the microhardness (as in step 1) of the paint on the areas of the test specimen on which the rust preventive was smeared. Report any staining or softening of the paint in the areas that had been covered with the rust preventive compound.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.