

STAINING TESTS FOR WINDSHIELD SEALERS

Application

This procedure describes two tests for determining staining by sealers of paint and the vinyl plastic of laminated automotive windshields.

Test Method A: Paint Staining

Test Method B: Staining of the vinyl laminate of windshield glass.

Apparatus Required

Fluorescent Sunlamp Cabinet

A modified oven equipped with four FS 20T-12 Fluorescent Sunlamps is required.

Oven

Approximate internal dimensions, 725 mm wide, 610 mm deep, and 520 mm high and capable of maintaining a temperature of 60 +/- 2 °C.

A Grieves-Hendry Oven, Model CR-326 is suitable.

The electric oven is to be equipped with Thermostat Control and a red pilot light.

Sunlamp Fixture

To be completely installed in the cabinet; 20 gage steel box with screw cover; four 20 watt high power factor ballast for each lamp; four fluorescent starter assemblies; four pairs fluorescent lamp holders; four Westinghouse FS 20T-12 fluorescent sunlamps.

The complete Fluorescent Sunlamp Cabinet is available from:

Infra Corporation
5454 Dixie Highway
Waterford, MI 48095
(313) 623-0400

or
Frapal Bucken GmbH & CoKG
Postfach 1309
D-5102 Wurselen, West Germany

Humidity Cabinet

Capable of maintaining a temperature of 38 +/- 2 °C.

Mechanical Convection Oven

Capable of maintaining a temperature of 100 +/- 2 °C.

Date	Action	Revisions
2000 12 08	Revised	Editorial – no technical change A. Cockman
1989 12 11		

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Materials Required

Light Petroleum Naphtha

CAUTION: Low flash point. Refer to Industrial Hygiene for health and safety comments.

Laminated Windshield Glass

Two plates; approximately 60 x 200 x 6 mm

Windshield Weatherstrip Rubber

Two straight lengths; approximately 200 mm

Test Panel

Prepared according to FLTM BI 103-02

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

Test A - Paint Staining

1. Prepare a paint panel as described in FLTM BI 103-02, Method C, using currently-released light-colored production enamel.
2. One h after the color coat has been baked, flow a 5.0 mm bead of the sealer over the length of the panel and expose for 24 h in the fluorescent sunlamp cabinet, at 60 +/- 2 °C, and 300 mm from the light source.
3. At the end of the 24 h period, remove one-third of the bead with a spatula and clean the area of the panel where the sealer was removed with a clean cloth wetted with petroleum naphtha.
4. Place the assembly in the fluorescent sunlamp cabinet and expose for an additional 48 h at 60 +/- 2 °C and 300 mm from the light source.
5. Examine and report any staining of the panel where the sealer was removed.
6. Remove one-half of the remaining bead of sealer with a spatula and again clean the exposed area with petroleum naphtha.
7. Expose the assembly in the fluorescent sunlamp cabinet for an additional 48 h at 60 +/- 2 °C and 300 mm from the light source and examine and report any staining of the paint coating formerly covered by the sealer.