

**WATER AND SOAP SPOTTING TEST FOR PAINT****Application**

This method is used to determine the resistance of painted finishes on metal and plastic parts to water and soap spotting.

**Apparatus Required****Color Matching Booth** - FLTM BI 109-01

Macbeth Color Matching Booth BX 1014 Super Skylight, BX 848a Super Skylight or SPL 75 Spectralight or approved equivalent.

**Mechanical Convection Oven**

Capable of maintaining a temperature of 60 +/- 2 °C.

**Weather-Ometer**

An Atlas XW Weather-Ometer, or approved equivalent, for activating the painted finishes. However, when a Weather-Ometer is not available, the top coat must be activated according to FLTM BO 115-01.

**Polyethylene Washers**

Approximately 25 mm I.D.

**Materials Required****Liquid Test Soap**

S-M1B4 or ESB-M1B9-4.

**Distilled or Deionized Water**

20 micromhos/cm at 25 °C maximum conductivity (ASTM D 1125).

**Referenced Ford Laboratory Test Methods**

|           |                                  |
|-----------|----------------------------------|
| BI 103-02 | Preparation of test parts        |
| BI 109-01 | Color matching of paints         |
| BI 109-03 | Color difference evaluation      |
| BO 101-01 | Resistance to artificial weather |
| BO 115-01 | Weathering test for plastics     |

| Date       | Action  | Revisions                                  |
|------------|---------|--------------------------------------------|
| 2001 03 19 | Revised | Editorial – no technical change A. Cockman |
| 1997 12 01 |         |                                            |

Printed copies are uncontrolled

Page 1 of 2

Copyright © 2001, Ford Global Technologies, Inc.

**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. Prepare test panels according to FLTM BI 103-02 with the enamel to be tested.
2. After baking and aging, place panels in the Weather-Ometer for 16 h to activate the paint finish.
3. Immediately after removal from the Weather-Ometer place a polyethylene washer on each end of the painted surface of the panel. Fill one washer with 2 mL of liquid soap and the other with 2 mL of distilled water.
4. Place the panel in the oven at 60 +/- 2 °C for 4 h.
5. Remove the panel from the oven, rinse the panel with tap water, dry carefully with a clean paper towel (but do not rub spots), and check for any color difference between the treated and untreated areas in accordance with FLTM BI 109-01 under North Sky Daylight. If a quantitative measurement of color difference is required by the Engineering Material Specification check in accordance with FLTM BI 109-03.

**Evaluation**

Report any color difference as water and soap spot discoloration.

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.