

MATERIALS / PAINTS

FNHA-2-J-001.14

HUMIDITY

1. SCOPE

This procedure is used to evaluate the ability of a dry paint film to resist degradation when exposed to 100% relative humidity.

2. REFERENCE STANDARDS

ASTM D2247 - Testing Water Resistance of Coatings in 100% Relative Humidity.

ASTM D714 - Evaluating Degree of Blistering and Paints.

86507636(FNHA-2-J-001.01) - Panel or Part Preparation

86507638(FNHA-2-J-001.03) - Gloss

3. MATERIALS AND EQUIPMENT

3.1 Duplicate panels prepared according to 86507636 (FNHA-2-J-001.01) using both Bonderite 1000 and production steel. Allow panels to age for 14 days at room temperature($25^{\circ} \pm 5^{\circ}\text{C}$) with adequate air circulation around each test panel.

3.2 Primer or an alternative method to protect the edges and back of each panel from rusting prior to humidity exposure.

3.3 Humidity cabinet using distilled water with temperature control to maintain 100% humidity at $38^{\circ} \pm 1^{\circ}\text{C}$ ($100^{\circ} \pm 1^{\circ}\text{F}$) conforming to ASTM D2247.

3.4 Glossmeter meeting 86507638 (FNHA-2-J-001.03).

3.5 Kleenex, Kimwipes or equivalent

4. PROCEDURE

4.1 Measure and record the average gloss of each paint to be tested.

4.2 Place the test panels in the humidity cabinet for 240 hours at 38°C and 100% humidity for 240 hours unless specified otherwise.

4.3 Remove the panels at the conclusion of the 240 hours of exposure and lightly wipe off the surface moisture.

4.4 Inspect the panels between 5 and 10 minutes after removal from the humidity cabinet, rate and record any blistering, rusting, or paint film deterioration per ASTM D714.

4.5 Allow a twelve hour recovery time and reinspect the panels, rate and record per 4.4.

4.6 Measure and record the average gloss reading for each paint being tested, within one hour after the recovery period.

4.7 Visually compare the color after testing to the initial color or paint standard.

5. REPORT

5.1 Report the average initial gloss readings.

5.2 Report the paint coating appearance at the 5 - 10 minute period after panel removal and after the 12 hour recovery period on both panel substrates.

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5.3 Report the gloss reading and any noticeable visual color difference from standard following the test recovery period.

5.4 Report the size and amount of blistering using ASTM D714 as the reference.

5.5 The paint passes if the following are met after the 12 hour test recovery period on the production panels or parts.

- Gloss after testing is at least 90% of initial reading.
- There is no visual color change.
- The size and quantity of blistering is #6 few or less.

There are no other visual film defects.

	NAME				PART NUMBER	
	STD HUMIDITY				86507649	
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