

Materials / Paint

FNHA-2-J-001.48

Cyclic Corrosion Test**1. SCOPE**

This procedure is used to determine the rate of corrosion a test sample observes during a cyclic testing. This test has cycles in salt spray, humidity and room environment, which produces a more realistic corrosion product compared with the outdoor exposure the New Holland product experiences. The number of cycles to be completed for a particular product shall be established in the product performance specifications.

2. REFERENCE STANDARDS

86507648(FNHA-2-J-001.13) - Salt Spray Test
 85607649(FNHA-2-J-001.14) - Humidity Test
 85607636(FNHA-2-J-001.01) - Panel Preparation

3. MATERIAL & EQUIPMENT

3.1 Panels prepared per standard 86507636 (FNHA-2-J-001.01).

3.2 The salt spray shall be perform in a salt spray cabinet which conforms to the practice of standard 86574854 (FNHA-2-J-001.13).

3.3 The humidity test shall be performed in a humidity cabinet, which conforms to the practice of standard 86507649 (FNHA-2-J-001.14).

4. PROCEDURE

4.1 The test panels are prepared per the test panel preparation procedure.

4.2 These panels are scribed to expose the substrate surface. The width of the scribe shall not exceed 0.5 mm. Typical scribe shall be an "X" scribe which shall run diagonal across the panel from corner to corner leaving about 25 mm's solid film near the corner.

4.3 These panels are place into the salt spray cabinet preferably on a Monday. The exposure time shall be 24 hours.

4.4 After the 24-hour period the salt spray panels are rinsed with water and placed into the humidity cabinet. The cycle in the cabinet shall be as follows;

16 hours at $21^{\circ} \pm 3^{\circ} \text{ C}$ ($70^{\circ} \pm 5^{\circ} \text{ F}$)
 8 hours at $40^{\circ} \pm 3^{\circ} \text{ C}$ ($104^{\circ} \pm 5^{\circ} \text{ F}$)
 98% relative humidity

This cyclic shall repeat itself for 4 total cycle consuming 96 hours to the test cycle.

4.5 When the humidity test is completed the panels are removed from the humidity cabinet and allowed to sit in room temperature and humidity. (Typical $21^{\circ} \pm 3^{\circ} \text{ C}$ ($70^{\circ} \pm 5^{\circ} \text{ F}$) at $50\% \pm 10\%$ relative humidity. The time shall be 48 hours.

4.6 The steps 1 through 5 shall consist of one cycle. Total time consumed is 168 hrs..

4.7 All surfaces are observed for blisters, defects, etc...

4.8 The amount of creepage from the scribe is measured in millimeters. A minimum of two measurements shall be taken per leg of the scribe and an average creepage shall be determined.

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4.9 Total creepage shall be the distance from the scribe in one direction times two plus the 0.5-mm scribe width. (Total creepage = average length from scribe times two (2) + 0.5mm) Both direction from scribe shall be noted.

5. REPORTS

The following data shall be reported in the test Materials Laboratory test report;

1. Total creepage in millimeters.
2. Any observed defects, blisters etc.

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	STD CYCLIC CORRSION				Documents	
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