

Materials / Paint

FNHA-2-J-001.49

WEATHER-O-METER**1. SCOPE**

This procedure is used to perform a test to determine the rate of damage due to effects of weathering. This test has cycles of xenon light, dark, and water spray, which produces a realistic weathering deterioration, as compared with the outdoor exposure New Holland product experiences. Deterioration observations shall be fading, chalking, cracking, hazing, blistering, gloss loss, strength loss, and embrittlement.

2. REFERENCE STANDARDS

86507638(FNHA-2-J-001.03) - Gloss measurement
ASTM G155 - Operating Xenon Arc Light
Apparatus For Exposure of Nonmetallic
Materials.
SAE J1960 - Accelerated Exposure of Automotive
Exterior Materials Using A Controlled
Irradiance Water Cooled Xenon Arc
Apparatus

3. MATERIAL & EQUIPMENT

3.1 The panel size shall be 2 X 4 inches.
Panels prepared per standard 86507636 (FNHA-2-J-001.01).

3.2 The test apparatus in this procedure is the Q-SUN 3000 Xenon test chamber.

3.3 The gloss shall be measured per standard 86507638 (FNHA-2-J-001.03)

4. PROCEDURE

4.1 The test panels are prepared per the test panel preparation procedure. A minimum of two samples will be place in the test chamber per each unique test product.

4.2 These test panels shall have their original gloss levels taken and noted. A minimum of three readings per panel shall be taken. The original color shall also be determined.

4.3 The evaluated test panels shall be placed into the mini-trays provided with the test chamber. These mini trays shall be placed into the Xenon test chamber

4.4 The test cycle shall be as noted in Table 1.

Table 1				
UV Filter: Daylight				
UV Sensor: 340				
Cycle	Description	Black Panel	Power W/m ²	Time Hour
1	Light	70° C	0.55	0:40
2	Light + Spray		0.55	0:20
3	Light	70° C	0.55	1:00
4	Dark + Spray	38° C		1:00
5	Final Step Go to set 1			

4.5 After each period of 100 hours, the test samples shall be removed from the test chamber. The test panels shall be reviewed for appearance. The gloss level shall be determined with a minimum of three readings. The color shall also be determined. All these value shall be noted.

4.6 The test samples in their mini-trays shall be returned to the test chamber.

4.7 The mini-trays shall be rotated clockwise every 168 hours (or once a week). The black panel shall always be located in the right rear position. This will require the removal of one sample from the mini-tray and placed into the next rotating tray.

					NAME	STD WEATHER-O-METER	
					 NEW HOLLAND		
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ALL	A	RE	114410	2/00	ENGINEERING SPECIFICATION FRAME 1 OF 2 PART NUMBER		
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5. REPORTS

The following data shall be in the Materials Laboratory Test Report:

- 1) The percentage of gloss retention from the original.
- 2) The change in color, DELTA E
- 3) Any change in appearance in the characteristics, physical properties etc.

The gloss and color may be plotted to give a visual review of the deterioration.

 NEW HOLLAND	NAME				PART NUMBER	
	STD WEATHER-O-METER				Documents	
	ENGINEERING SPECIFICATION	REV. A	FRAME 2	OF 2	86598361	