



Engineering Material Specification

Material Name

PAINT, WATER BORNE ELECTROCOAT - ACRYLIC ENAMEL

Specification Number

ESA-M62J13-A

1. SCOPE

The material defined by this specification is a heat curing, water based electrocoating acrylic enamel and associative make-up feed components.

2. APPLICATION

This material was released originally for use as a primer or final coat for wheels.

3. REQUIREMENTS

3.1 COMPOSITION

3.1.1 Non-Volatile (FLTM BI 2-1)

3.1.1.1 Charging Material Weight, % min 32

3.1.1.2 Feed Material Weight

3.1.1.2.1 Resin, % min 70

3.1.1.2.2 Pigment, % min 33

3.1.2 Volatile Deionized Water

3.2 WEIGHT PER LITRE AT 22°C

3.2.1 Charging Material, Kgs 3.80 - 3.95

3.2.1.1 Resin 3.90 - 4.00

3.2.1.2 Pigment 4.13 - 4.26

3.3 STABILITY

No more than 5% increase in viscosity after 72 hours beyond initial viscosity of material reduced to 7-8% solids.
(FLTM BI 16-2)

Date	Para. No.	Revisions	Approval
1/30/79		RELEASED CSJ2-CBJ2-	2/14/79 [Signature]
		CZJ2-822575-C	B.L. 4-27-79 [Signature]

1979 02 13
Eng Res
June 77 3948-a

Page 1 of 3

9009160 0014201 017



Documents

Document Sharing Hub

**3.4 INFRARED SPECTROPHOTOMETRY (IR), EMISSION SPECTROSCOPY (ES), AND THERMOGRAVIMETRIC ANALYSIS (TGA)**

Ford Motor Company, at its option, may conduct IR, ES, and TGA of material/parts supplied to this specification. The spectrum established for initial approval shall constitute the reference standard and shall be kept on file at Central Laboratory. All samples shall produce curves that correspond to the reference standard when tested under the same conditions as those specified on the master curve.

Prepare the IR sample by scraping the cured paint from a test panel and mixing with infrared quality potassium bromide. Pulverize the sample with a mortar and pestle or a mechanical mixer to a homogeneous powder and press into a pellet with a hydraulic at 11.7 MPa (17,000 psi). Place the pellet in the infrared beam and scan.

**3.5 THROWING POWER, (millimeters min)
(FLTM BI 20-2C)**

(Before Salt Spray)	133.35
(After 240 hours salt spray exposure)	69.85

3.6 PANEL PREPARATION

Prepare panels per FLTM BI 20-1. When this material under test is specifically for use on other substrates, supplementary tests shall be run, using panels or parts made from the substrate and processed by an approved production method prior to painting. All panels shall be conditioned for 72 h at $\pm 3^{\circ}\text{C}$ or 16 hours at $43 \pm 1^{\circ}\text{C}$ prior to testing.

3.7 FILM CHARACTERISTICS

3.7.1 Thickness (millimeters) (FLTM BI 17-1)	0.019 - 0.020
---	---------------

3.7.2 Salt Spray Resistance, h min (FLTM BI 3-1)	240
---	-----

No more than 3.175 millimeters rust or blister creepage from a line scribed to bare metal.

3.7.3 Gloss, min (FLTM BI 10-1, 60°)	70
---	----

3.7.4 Color	Black
-------------	-------

3.7.5 Water Immersion Resistance, h min (FLTM BI 4-1)	240
--	-----

No failure by blistering, peeling, or loss of gloss.

3.7.6 Florida Exposure

After 12 months exposure at 45° facing south, in the Miami, Florida area, there shall be no more blistering, peeling, or visible rusting along the scribe line than the currently approved material. Panels shall be scribed with an "X" to the base metal prior to exposure. Florida exposure shall be conducted only for initial qualification.

1979 02 13

Eng Res
June 77 3948-b

Page 2 of 3

9009160 0014202 T53



Documents

Document Sharing Hub