



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

PAINT, CLEARCOAT, TWO PACK, FOR PLASTIC SUBSTRATES,
EXTERIOR

SK-MLJ9563-A

1. SCOPE

The material defined by this specification is an exterior clearcoat for plastic parts. It must be cured with a suitable isocyanate hardener.

2. APPLICATION

This specification was released originally for material used as two pack clearcoat over metallic basecoat for various exterior applications such as radiator grilles, mirrors, body side moldings, etc.

3. REQUIREMENTS

3.1 STATISTICAL PROCESS

Suppliers must conform to the requirements of Ford Quality System Standard Q-101. A mutually acceptable Control Plan as described therein is required for material/source approval. Appropriate statistical tools must be used to analyze process/product data so that variation in the final product is continuously reduced.

3.2 INFRARED SPECTROPHOTOMETRY AND/OR THERMAL ANALYSIS

Ford Motor Company, at its option, may conduct infrared and/or thermal analysis of material/parts supplied to this specification. The IR spectra and thermograms established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce IR spectra and thermograms that correspond to the reference standard when tested under the same conditions.

3.3 CONDITIONING

All tests 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.

3.4 COMPOSITION

3.4.1 Resin: Synthetic resins, containing hydroxyl groups.

3.4.2 UV - Stabilizer: The clearcoat shall contain a combination of UV-Absorber and Light Stabilizer (e.g. steric hindered amines).

Date	Release No.	Release/Revision
1993 06 01	EP00E10258817000	complete revise KW
1983-01-12	B/453 222 TP	revised 3.1.8
1980-03-06	SM/EQ 8615 TP	Release

WP 3948-a

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3.5 MATERIAL PROPERTIES

- 3.5.1 Non-volatile (FLTM BI 102-01) see Initial Sample +/- 1 %;
min. 40 %

The non-volatile content shall be determined at a spray viscosity of 20 s according to para 3.5.4.

- 3.5.2 Density (ASTM D 1475) see Initial Sample +/- 0.02 g/mL

- 3.5.3 Viscosity as supplied (FLTM BI 111-01) see Initial Sample +/- 2 s

- 3.5.4 Spray Viscosity (FLTM BI 111-01, FC #4) as specified by the supplier

The material can be reduced with Xylene (S-M14J245-A), Butyl acetate (ESK-M14J228-A) or any other suitable thinner.

- 3.5.5 Mixing ratio as specified by the supplier

The material shall be cured with isocyanate hardeners ESK-M99J323-A1/-A2, SK-M99J9608-A or any other suitable hardener.

- 3.5.6 Storage Stability: 90 days

During a storage of 90 days between 5 and 32 C temperature the material as supplied shall not settle up or cake insoluble. After the storage the material must pass all specification requirements.

3.6 PREPARATION OF TEST PANELS

- 3.6.1 Substrate

ABS, Polyamide, Polycarbonate or Polypropylene, etc. as specified on Engineering Drawing. All tests shall be performed on panels with a smooth, ungrained surface.

- 3.6.2 Plastic Preparation

The surface to be painted shall be cleaned by an acceptable process, e.g. power wash, to remove mold releasing agents, fingerprints, oils, dirt and moisture.

Note: PP/EPDM plastics must either be primed with an adhesion primer or pretreated (flame process, etc.) prior to painting to provide sufficient paint adhesion.

- 3.6.3 Primer Surfacer (if required)

Application of a primer surfacer, filmthickness and baking as specified in the relevant material specification.