



PAINT PERFORMANCE, THERMOSETTING POLYESTER POWDER COATING ON BRIGHT METAL, EXTERIOR

WSK-M2P146-A

1. SCOPE

This specification defines the performance requirements for an excellent decorative finish with exterior thermosetting polyester powder coating over bright metal substrates. The powder coating shall provide good initial appearance with excellent durability and corrosion resistance.

2. APPLICATION

This specification was released originally for polyester powder coatings to provide excellent corrosion resistance to specified color and gloss over such substrates as zinc die cast, chrome plated steel and die cast, aluminum, zinc galvanized and stainless steel parts. Other resin systems are not permitted.

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.3 SYSTEM COMPONENTS

3.3.1 Substrates

Zinc die cast, chrome plated steel and die cast, aluminum, zinc galvanized and stainless steel parts, as specified on the Engineering Drawing.

3.3.2 Metal Preparation

3.3.2.1 Cleaning

The surface to be coated must be free from oil or alkaline residues, fingerprints, rust, dirt, moisture and other foreign materials.

3.3.2.2 Zinc Phosphate

Zinc Phosphate coating to WSK-M3P1-C. Chromium oxide coating to WSK-M6P2-B is used for aluminum. Zinc Phosphate WSK-M3P1-C shall be used if steel and aluminum parts are processed concurrently.

The aluminum tolerance of the process shall not be exceeded and all requirements of both WSK-M3P1-C and this specification shall be met by both steel and aluminum parts.

Chromium Plated and Stainless Steel parts shall be cleaned and pretreated to relevant Ford Approved Process or Manufacturing Standard.

Date	Action	Revisions
2005 11 03	RE-ACTIVATED	Inserted 3.0; Deleted 3.1, 3.2, 3.6, 3.7 & 4; Re-activated per Europe's request, will be made inactive after 2007/01/01 R. Lord
2003 04 08	INACTIVATED	Replaced by WSS-M2P180-A R. Lord
1990 02 01	C01031532	Released C.E.Herrero concurred J. Schult



3.3.2.3 Coating Material

Ford Engineering approved polyester powder material meeting Material Specification WSK-M70J8-A requirements applied by electrostatic spray or fluidized bed. Other resin systems are not permitted.

3.4 FILM PROPERTIES

3.4.1 Color (FLTM BI 109-01)

As specified on Engineering Drawing or Color Release Supplement.

Shall match the Master Appearance Sample color panel.

3.4.2 Gloss (FLTM BI 110-01)

As specified on Engineering Drawing or Color Release Supplement.

Shall be specified by means of a letter suffix listed in the Material Specification to the color number assigned by the color release system.

3.4.3 Initial Hardness

The finish shall be sufficiently cured at time of packing and shipping to withstand normal handling without damage.

3.4.4 Film Thickness, min (FLTM BI 117-01)

30 micrometre

Coating must be sufficient to meet all performance requirements of this specification.

3.4.5 Ageing

All parts shall be aged for 72 h at 23 +/- 2 °C only before testing for resistance properties.

3.5 RESISTANCE PROPERTIES

3.5.1 Paint Adhesion (FLTM BI 106-01, Method B)

Grade 0
No chipping

3.5.2 Chip Resistance, max (FLTM BI 107-01)

Rating 2, max
area loss, 0.5%