



PAINT, ONE COMPONENT COLOR BASECOAT/
TWO COMPONENT CLEARCOAT FOR PLASTIC,
INTERIOR BASE/CLEAR COAT SYSTEM, HIGH GLOSS (A-B)

WSS-M15J17-A1

PAINT, ONE COMPONENT COLOR BASECOAT/
TWO COMPONENT CLEARCOAT FOR PLASTIC,
INTERIOR BASE/CLEAR COAT SYSTEM, LOW GLOSS (C-L)

WSS-M15J17-A2

1. SCOPE

The material defined by these specifications is a pigmented one-component basecoat/two-component clear coat system suitable for first surface application to interior plastic parts.

2. APPLICATION

These specifications were released originally as a decorative finish for interior parts. All painted parts must meet WSS-M2P188-B1/Latest. All paint applicators must meet the Interior Parts Painter Approval Process (WSS-M2P195-A). These paint systems are typically used to decorate interior visible surfaces (i.e. steering wheel bezels, switches, buttons, console, etc.).

3. REQUIREMENTS

3.1 APPROVED SOURCES

This specification requires the use of approved sources. Only the sources identified on the Ford Approved Source List (ASL) can be used when this specification is listed on the drawing, CAD file, or other documents. The list of approved sources is located within Ford at www.mats.ford.com or available externally through a Ford Materials Engineer.

3.2 PREPARATION OF TEST PANELS

3.2.1 Testing Requirement/ Specimen Preparation

Tests shall be performed on plaques of appropriate substrate. See Table 1 for testing requirements & sample size.

Design Verification Testing (DV) is done on plaques by the paint supplier as defined in Table 1.

Product/Process Validation Testing (PV) is done on production painted parts as outlined in the painted part Performance Specification WSS-M2P188-B1/Latest.

3.2.2 Substrate

Polymers and polymer blends (i.e ABS, PC, PC/ABS). All test specimens shall be injection molded plaques or parts having a nominal thickness of 2.5 +/- 0.2 mm or as specified on the engineering document.

Date	Action	Revisions	Rev 02
2017 06 27	Editorial	Corrected footer	A. Collins, NA
2016 08 09	Revised	See Summary of Revisions	J. Bilko, NA
2013 03 14	Released		J. Crist, NA



3.2.3 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.

3.2.4 Primer

When necessary in order to meet the requirements of this specification, an adhesion promoter, primer surfacer or sealer may be needed. Surface enhancements, such as flaming or plasma treatment that modify surface tension, surface conductivity may also be required in order to meet the requirements. This must be noted in the initial submission package and recorded on the Ford Approved Source List (ASL).

3.2.5 Cure

Supplier shall define Cure Window as described in Paragraph 3.5. This should be included in the submission package and DFMEA.

3.2.6 Ageing

Test panels or test specimens prepared for investigations according to this specification must be aged for at least 72 hours at 23 +/- 2 °C or 16 hours at 45 +/- 1 °C prior to testing.

3.3 APPEARANCE

3.3.1 General

Color, gloss, grain, tactile effect and surface finish shall match master Trim Sample and/or Master Appearance Sample as approved by Corporate Design.

The coating shall exhibit no craters, pinholes, solvent popping, seediness, abnormal roughness excessive flow or any other detrimental defect.

3.3.2 Color (FLTM BI 109-01, Visual Assessment and/or SAE J1545, MA58 Three-Angle CMC)

Shall match the Master Approved Sample.

3.3.3 Gloss (FLTM BI 110-01, ASTM D523)

As released by Engineering:

A:	20° Glossmeter	min 92
B:	60° Glossmeter	76 - 84
C:	60° Glossmeter	66 - 74
D:	60° Glossmeter	58 - 66
E:	60° Glossmeter	47 - 53
F:	60° Glossmeter	33 - 38
G:	60° Glossmeter	17 - 23
H:	60° Glossmeter	7 - 13
J:	60° Glossmeter	4 - 6
K:	60° Glossmeter	2 - 4
L:	60° Glossmeter	0.5 - 2.0
N:	60° Glossmeter	1.8 - 2.4
R:	60° Glossmeter	1.2 - 1.6



The color, pattern and finish shall match the approved Design Center master sample, or shall be as specified on the Engineering Document. Gloss can be affected by grain so the end gloss for the part will be determined & approved by visual evaluation by Design Quality. An accurate gloss reading needs to be performed on a flat smooth surface otherwise an accurate gloss reading can't be obtained.

3.4 FILM PROPERTIES

All film properties are based on the proper preparation per para 3.2 with acceptable appearance, gloss reading, film thickness and after post cure per paragraph 3.2.6.

3.4.1 Film Thickness, (ASTM B487, FLTM BI 170-01, or other mutually agreed upon method)

Base:	15 – 30 micrometers
Clear:	25 – 40 micrometers

Note: These ranges are considered to be requirements unless otherwise supported by testing data agreed to by Materials Engineering.

3.4.2 Adhesion (FLTM BI 106-01, Method B)

Hand sand paint film surface (10 double rubs, moderate pressure) with P600 sandpaper until dull, before knife operation and checking adhesion. Clean film surface with 50/50 mixture IPA/water before testing.

3.4.2.1	Knife Test	Grade 0
3.4.2.2	Intercoat Adhesion	Grade 0

This test is applicable to the following:

WSS-M15J17-A1/A2 Repair/Tu-tone paints

The first coat shall cover the entire test panel and the repair/tutone coat shall only cover half of the panel. Color and gloss shall match between the original coat and the repair coat of the same color. The repair/tutone must meet all other requirements of the specification.

The processing window (3.5) for the repair/two-tone coat shall be identified to ensure good adhesion properties.

3.4.3 Water Resistance (FLTM BI 104-01, 96h)

Grade 0

No blistering, softening, dulling, or loss of adhesion per para 3.4.2.1 within 30 minutes of removal from water.

3.4.4 Abrasion Resistance, (SAE J948, Taber method, 500 g load, CS-10 wheels)

The paint film shall show no abrasion through to the substrate

Abrasion resistance shall be determined on test panels with smooth surface. Paint must be sprayed on panels of contrasting color (ex. black paint on gray substrate) to improve judgment of wear to the substrate. Measure and report the sample's paint film thickness.