PAINT, TWO COMPONENT COLOR COAT FOR PLASTIC, INTERIOR

SOFT TOUCH, STRAIGHT SHADE **WSS-M15J15-A1**

SOFT TOUCH, METALLIC **WSS-M15J15-A2**

1. SCOPE

The material defined by these specifications is a pigmented two-component urethane paint system suitable for first surface application to interior plastic parts.

2. APPLICATION

These specifications were released originally as a decorative finish for interior parts, primarily airbag covers. All painted parts must meet WSS-M2P188-A1. All paint applicators must meet the Painted Part Approval Process (AVP-T113-0116). These paint systems are typical used for painting Airbags.
Note: the use of primer/sealer is required for ABS substrates unless approved by Materials Engineering.

3. REQUIREMENTS

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

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

3.2 PHYSICAL PROPERTIES

3.2.1 Stability
(6 months at 23 +/- 2 °C)

Shall not liver or jell upon standing and must be free from settling which is not dispersed by normal agitation. The viscosity of the material shall not increase or decrease more than 10 s.

3.3 PREPARATION OF TEST PANELS

3.3.1 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-A1.

Date	Action	Revisions	
2009 05 21	Revised	See Summary of Revisions for details	Global Paint Team
2005 05 10	Revised	Revised 2, 3.4.3, 3.5.13, 3.5.16 & 4.1	C. Lin
2004 05 27	Activated		C. Lin

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3.3.2 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.

3.3.3 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.

3.3.4 Primer

When necessary in order to meet the requirements of this specification, an adhesion primer, primer surfacer or sealer may be needed. Surface enhancements, such as flaming or plasma treatment that modify surface tension, surface resistivity 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).

3.3.5 Cure

Supplier shall define Cure Window as described in Paragraph 3.6. This should be included in the submission package and DFMEA.

3.3.6 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

3.4 APPEARANCE

3.4.1 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, or excessive flow.

3.4.2 Color
(FLTM BI 109-01, Visual Assessment)
(SAE J1545, MA58 Three-Angle CMC)

Shall match the Master Approved Sample.

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3.4.3 Gloss
(FLTM BI 110-01, ASTM D 523)

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

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.

3.5 FILM PROPERTIES

All film properties are based on the proper preparation per para 3.3 with acceptable appearance, gloss reading, film thickness and after post cure per paragraph 3.3.6.

3.5.1 Film Thickness, range, micrometers (ASTM B 487 or other mutually agreed upon method) — 45 - 55

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

3.5.2 Adhesion
(FLTM BI 106-01, Method D)

3.5.2.1 Adhesion

Less than 5% paint removal with no complete diamonds removed. Six lines in each direction should make up the grid. The overall dimensions should be at least 25 mm wide by 50 mm long from the widest and longest points unless restricted by part size.

3.5.3 Water Resistance, min. (FLTM BI 104-01, 96 h,) — Grade 0

No blistering, softening, dulling, or loss of adhesion per para 3.5.2 within 30 minutes of removal from water.

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