



EXTERIOR PLASTICS LAMP ASSEMBLY PERFORMANCE

WSS-M98P10-B

1. SCOPE

This specification defines the performance requirements for exterior lamp assemblies.

2. APPLICATION

This specification was released originally to define the performance requirements for exterior lamp assemblies such as front and rear lamps, CHMSL, license plate lamps, and mirror lamps, etc.

3. REQUIREMENTS

3.1 MATERIAL PERFORMANCE

All exterior lamp components must meet relevant material performance specifications, unless agreed to by Ford engineering:

- All painted exterior trim components (external to outer lens) shall meet the requirements of WSS-M2P180-latest for rigid substrates, WSS-M2P181-latest for flexible substrates.
- All exterior mold in color plastic components (i.e. ASA, PMMA, etc.) shall meet the requirements of WSS-M98P13-latest.
- All exterior decorated chrome electroplated components shall meet the requirements of WSS-M1P83-E2 (latest).
- All adhesively bonded assemblies shall meet the requirements of WSS-M11P28-Latest.
- All painted or metallized internal components (internal to outer lens) shall meet the requirements of WSS-M5P8-C1/C2 (as applicable).

3.2 FSMS PERFORMANCE

All exterior lamp components must meet applicable requirements listed in the Exterior Lighting FSMS (EXTLGT), unless otherwise agreed to by Ford engineering, including, but not limited to:

- *RQT-170000-010976 (legacy EX-0013): CORROSION RESISTANCE
- *RQT-170000-010972 (legacy EX-0009): RESISTANCE TO THERMAL CYCLE
- *17.00-E-4768: HEAT AGING, SHOCK TEST
- *RQT-170000-010974 (legacy EX-0011): RESISTANCE TO CHEMICAL EXPOSURE
- *RQT-170000-011067 (legacy EX-0274): WELDED LENS-TO-BODY STRENGTH & SEAL INTEGRITY
- RQT-170000-011037 (legacy EX-0244): LENS TO BODY ADHESIVE STRENGTH
- RQT-170000-010978 (legacy EX-0015): RESISTANCE TO IMPACT FOR FRONT LIGHTING DEVICES
- RQT-170000-011048 (legacy EX-0255): IMPACT RESISTANCE FOR SIDE AND REAR LIGHTING DEVICES
- RQT-170000-010975 (legacy EX-0012): RESISTANCE TO HEAT WARPAGE

(* Referenced in 3.4.2)

Date	Action	Revisions	Rev. 02
2018 03 27	Revised	See Summary of Revisions	K. Mueller, NA
2018 03 08	Editorial	See Summary of Revisions	K. Mueller, NA
2017 12 13	Released		K. Mueller, NA

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3.3 APPROVED SOURCES

This specification is performance based and does not have approved sources.

3.4 CLEAR PROTECTIVE COATINGS

All clear protective coatings must use an approved source from WSS-M80J6-latest / WSS-M16J18-latest. Surrogate data from WSS-M80J6-A or WSS-M16J18-A is acceptable, however, if not using an approved source, para 3.4.1 must be performed. Applicable to parts using materials without previous weathering approval.

- 3.4.1 Accelerated Weathering Resistance
Defer to appropriate UV Cure (WSS-M80J6-A para 3.8.3) or
Thermal Cure (WSS-M16J18-A para 3.8.3).

Yellowness Index (YI), Haze, and Adhesion is required.

3.5 CLEAR COATED LENS

Unless otherwise indicated, the following testing must be done on the coated lens.

Clear coated parts shall be aged 16 h at 45 +/- 2 °C or 72 h at 23 +/- 2 °C followed by a minimum of 24 h at 23 +/- 2 °C and 50 +/- 5% relative humidity prior to test (unless otherwise noted).

Testing must be conducted per Table 1.0, unless otherwise agreed to by Ford Materials Engineering.

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|---------|--|-----------------------|
| 3.5.1 | Baseline Adhesion
(ASTM D 3359, Method B, 13 cm ² of 3M 898-2 tape) | 4b or better |
| | Lightly hand sand clear coat surface (10 double rubs, moderate pressure) with P600 Paper until dull, before scribe operation and checking adhesion. | |
| 3.5.2 | Adhesion After SDS Testing (Para 3.2 – Only *)
(ASTM D 3359, Method B, 13 cm ² of 3M 898-2 tape) | 4b or better |
| | *Test after relevant SDS testing (on assembly is acceptable).
Lightly hand sand paint film surface (10 double rubs, moderate pressure) with P600 Paper until dull, before scribe operation and checking adhesion. | |
| 3.5.3 | Film Thickness
(ASTM B 487) | Report |
| 3.5.4 | High Performance Coating Adhesion | |
| 3.5.4.1 | Thermal Shock Test for Coating Adhesion
(FLTM BI 107-05) | Rating 19 min |
| | Or Alternate Method | |
| 3.5.4.2 | Resistance Against High Pressure Cleaner
(FLTM BO 160-04, Method B) | 2 mm ² max |

Prior to testing the painted surface shall be X-scribed through to the substrate (30° angle). The test must be performed on the X-scribe.