



ANODIZED ALUMINUM PERFORMANCE, DECORATIVE EXTERIOR TRIM

WSS-M4P13-A

1. SCOPE

This specification defines the minimum durability and performance requirements of anodized aluminum for bright decorative trim components.

2. APPLICATION

This performance specification was released originally for anodized aluminum outer belt moldings.

2.1 LIMITATIONS

Any cleaning agent containing a combination of ethoxylated C12-15 fatty acid and sodium metasilicate should not be used to clean this material (example: Motorcraft Multipurpose Cleaner). Surface attack will occur leaving a chalky substance on the surface.

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 ANODIZED ALUMINUM PERFORMANCE MANAGEMENT

All materials evaluated under this performance specification must have Supplement A completed and signed by Ford Materials Engineering, the material/coatings supplier, and the Tier One supplier. The Supplement A and specification data will be stored in the Ford Materials Database (FMD). If the aluminum is being applied to an outer belt molding, compatibility of the anodized aluminum with seal material (s) is the responsibility of the Tier One supplier. The Tier One supplier shall have the seal tested against the applicable performance specification requirements.

Table 2.0 describes the construction of the anodized aluminum, and must be submitted with Supplement A. (Reference Supplement A). The Tier One supplier is responsible for including Table 2.0 and this performance specification on the part drawing.

3.3 FINISHED PARTS

Testing must be conducted at Design Verification (DV) and Product Validation (PV) per Table 1.0 (including Supplement A), unless otherwise agreed to by Materials Engineering, and on actual production parts or a section of the part whenever possible. Where part dimensions limit testing equipment access, representative test samples may be substituted. PV Testing must be conducted on actual production processed parts. No change in material, facility, or processing is permitted without written approval from Ford Materials Engineering Activity, via SREA.

Date	Action	Revisions	Rev. 2
2014 06 12	Editorial	Corrected suffix	
2014 06 10	Updated	See Summary of Revisions	G. Eaton, NA
2011 10 10	Activated		G. Eaton, FMEA

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All test values are based on parts conditioned in a controlled atmosphere of 23 +/- 2 °C and 50% R.H. for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

3.4 APPEARANCE: COLOR, FINISH, SURFACE (FLTM BI 109-01)

The color, gloss, and finish of the anodized aluminum part shall be specified on the engineering drawing and be uniform along the entire length of the assembly.

The surface shall be free of blisters, voids and scratches.

3.5 RESISTANCE PROPERTIES

Paragraph 3.5.1 Corrosion Resistance, shall be tested on whole parts or sections of assemblies and must include all materials and interfacing parts (i.e. mating parts).

Separate specimens are required for each test.

The parts after being subjected to the tests listed below shall conform to the following requirements in addition to the ones listed:

- (a) No cracking, chalking, crazing, iridescence, bloom, milkiness, separation, loss of adhesion (coating), or loss of embossment allowed (as defined in ASTM D1566).
- (b) No visible corrosion or blistering is permitted.

3.5.1 Corrosion Resistance (CETP 00.00-L-467)

Moderate Visibility - 6 weeks exposure

No Visible Change

High Visibility – 9 weeks exposure

No Visible Change

Design with Crevices – 12 weeks exposure

No Visible Change or
Loss of Functionality

3.5.2 Fluid Resistance (FLTM BI 168-01, Method B, ISO 105-A02/AATCC Evaluation Procedure 1)

Rating 5 min

No Visible Change

Test Fluids:

Gasoline

Diesel

Coolant

Engine Oil

DI Water

Windshield Washer Fluid

Motorcraft Bug and Tar Remover

Glass Cleaner

IPA

