PRETREATMENT, ALUMINUM, CONTINUOUS APPLIED **WSS-M10P12-B1**

PRETREATMENT, ALUMINUM, BATCH APPLIED **WSS-M10P12-B2**

1. SCOPE

This specification defines the requirements for pretreatment for bond durability intended to be used on sheet, wrought, and cast aluminum.

The pretreatment for bond durability coatings shall be specified in conjunction with the appropriate base aluminum specification.

2. APPLICATION

This specification was originally released for material used for automobile body parts requiring long term durable adhesive bonding performance.

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 STRUCTURAL ADHESIVE PERFORMANCE REQUIREMENTS

Material supplied to this specification shall demonstrate acceptable stress durability and impact toughness performance as detailed in the adhesive performance specification, WSS-M2G410-A, Sections. 3.5.2 and 3.5.4 with the following exceptions:

For stress durability (sec. 3.5.2), all samples shall be tested at a load of 2400 +/- 25 N, and shall withstand a minimum of 45 cycles.

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- Coupons shall be subjected to a 7% uniaxial strain after pretreatment prior to testing.
- For continuous coil heat treatable sheet, coupons sheet be T82 heat treated per FLTM AB 107-01 prior to testing.

WSS-M10P12-B2 – no pre-strain conditioning is allowed after pretreatment prior to testing.

3.3 SEALANT PERFORMANCE REQUIREMENTS

Material supplied to this specification shall demonstrate acceptable performance as detailed in the applicable sealant material specification defined by Product or Materials Engineering.

3.4 PAINTABILITY

The paintability requirements of the appropriate base aluminum material specification shall apply.

Date	Action	Revisions	Rev 0
2013 11 07	Released		C. Mracna, NA

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3.5 WELDABILITY
(FLTM BB 113-07)

The weldability requirements of the appropriate base aluminum material specification shall apply.

The weldability shall meet the performance requirements outlined in FLTM BB 113-07 for sheet metal. Final approval of weldability will be determined by the affected manufacturing facility.

3.6 COATING UNIFORMITY

The coating shall be uniformly applied across the substrate surface. The supplier will be responsible and will document the measurable in the Supplier's Control Plan.

3.7 SHELF LIFE

For time sensitive aluminum substrates (i.e. naturally aging), the pretreated aluminum substrate shall have a minimum shelf life of 180 days when transported and stored in conditions that avoid condensation and contamination by foreign oil and grease.

For all other aluminum substrates, the pretreated aluminum substrate shall have a minimum shelf life of 1 year when transported and stored in conditions that avoid condensation and contamination by foreign oil and grease.

3.8 FUNCTIONAL APPROVAL

Materials being evaluated for approval to this specification shall be subjected to a production trial. Functional trial results must be approved by the affected stamping and assembly operation and Design Engineering. Results shall be made available to Materials Engineering prior to material approval.

4. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification. Contact gmfs@ford.com for questions concerning Engineering Material Specifications.

4.1 COATING WEIGHT

The coating shall be uniformly applied across the substrate surface at a given coating weight. The supplier will be responsible and will document the measurable in the control plan.

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