WAX COATING PERFORMANCE, CORROSION PROTECTION, AUTOMOTIVE CAVITIES **WSS-M21P35-A**

WAX COATING PERFORMANCE, CORROSION PROTECTION, AUTOMOTIVE CAVITIES, ODOR APPROVED **WSS-M21P35-A2**

1. SCOPE

These specifications define the performance requirements of corrosion protective waxes for vehicle cavities. Cavity waxes can compensate insufficiencies in the application processes for phosphate, electrocoat, sealer and paint and improve corrosion resistance by penetrating into spot welded joints, clinch/hem flanges and other crevices which are not or only incompletely filled with sealer or adhesive.

Wax according to these specifications is designed for a nominal film thickness of 25 - 40 um. The specification does not restrict the type of material but covers low, medium and high solid conventional waxes as well as water based and solvent free materials.

2. APPLICATION

These specifications were released originally for cavity waxes sprayed into box sections below the floor panel (rocker panel, side and cross members, etc.), in the engine compartment and to lower areas of pillars, doors, hood and tailgate.

They are applied to the vehicle body after the paint process, prior to final assembly.

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).

Part producers using this material in their products, must use Ford approved materials and must conform to a process control plan which has been approved by STA and/or the relevant Materials Activity.

3.2 MATERIAL PROPERTIES

Special properties (e.g. suitability for use in locations with tropical climate, possibility for accelerated drying, etc.) or restrictions (protection from freezing, etc.) must be noted in the initial approval documents.

Date	Action	Revisions	Rev 03
2015 02 10	Revised	See Summary of Revisions	U. Mueller, EU
2009 06 24	Revised		U. Mueller
1999 03 08	Activated		K. Wolters

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3.3 PERFORMANCE OF THE DRY WAX FILM

3.3.1 Surface film

Wax material must be suitable for form a closed continuous film without, voids and bubbles in areas specified by Product Development.
After drying the wax shall be sufficiently hard to withstand normal handling during final assembly without damage. It may be tacky but must not stain cables, trim parts or clothing.

3.3.2 Water Resistance

The wax film shall be resistant against water impingement immediately after drying.

3.3.3	Temperature Resistance (1 h at 110 +/- 2 °C)	5 mm max

Apply 40 micrometer wax to one half of a painted panel (mark the edge) and dry. Place the panel vertically for 1 hour in a convection oven, wax coated side up.

3.3.4	Crack Resistance (FLTM BJ 128-03, 72 h at 23 +/- 2 °C)	No cracks, voids or shrinkage allowed.
3.3.5	Low Temperature Resistance (ASTM D 522, Method B, - 30 C)	No cracking

Apply 40 micrometer wax to a test panels and place it in a cold box for 24 hours, together with a mandrel of 30 mm diameter. While in the cold box, bend the panel 180° over the mandrel.

3.3.6	Odor (for A2 only) (FLTM BO 131-03, Condition 1 and 2)	Rating 3 max

3.4 CORROSION RESISTANCE, LABORATORY

Lab tests are for comparison only. They shall be performed on standard test panels at 30 - 40 micrometer film thickness. Lab test results are predominated by results from the proving ground evaluation.

3.4.1 Resistance to Accelerated Cyclic Corrosion
(CETP 00.00-L-467)

Zn-coated and CRS steel: 2 weeks

Evaluation after removing of the wax:

No corrosion on the panel surface and not more than 3 mm rust creepage from edges.

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