



CAVITY WAX, WATER BASED, MEDIUM SOLID, 50% SOLID

WSS-M7C93-A

1. SCOPE

The material defined by this specification is a water based rust preventive wax used to improve the corrosion resistance of vehicle cavities (cross or side members, doors, hoods) and gaps (welded joints, flanges).

2. APPLICATION

This specification was released originally to define the properties of cavity waxes applied to the vehicle body after the paint process, prior to final assembly. They provide additional corrosion protection and can compensate weaknesses in the body paint process.

The materials are applicable for all kinds of metal substrates (CRS, precoated steel, aluminum).

The metal surfaces in cavities and gaps are usually not clean but contaminated with residues of drawing lubricants, temporary corrosion protectives or cleaners. They may also be coated with an undefined phosphate coating and/or with a thin electrocoat layer.

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

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

3.4 PHYSICAL PROPERTIES

3.4.1 Non-Volatile Content, min 50%
(FLTM BI 102-01)

3.4.2 Viscosity See Initial Sample

A flow diagram to identify the characteristic properties of the material shall be added to the Initial Sample Report, together with a list of the relevant test parameter (temperature, shear rate, time, etc.) and the equipment details.

3.4.3 Density See Initial Sample
(ASTM D 1475) +/- 0.05 g/mL

Date	Action	Revisions
2004 03 09	Revised	Para 3.0 inserted; paras 3.1, 3.2, 3.3, 3.13 and 4 deleted
1999 02 09	Revised	Revised para 3.4.4
1997 08 27	Activated	

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3.4.4 Storage Stability, min

The storage stability must be adapted to the climate conditions at the individual plant.

Min storage conditions for all waxes: 6 months at 32 °C
and 6 months at 5 °C
Additionally for tropical climates: 3 months at 40 °C

After the storage, the material shall not show any insoluble separation or coagulation and must meet all specification requirements.

3.5 MATERIAL PROPERTIES

3.5.1 Flow, Material as Supplied 100 - 250 mm
(FLTM BJ 128-01, 20 °C and 40 °C)

After drying as recommended by the supplier the material must not show any flow.

3.5.2 Creeping Power, min 30 mm
(FLTM BJ 128-02, Method A)

The creeping power per Method B must be as good as or better than the result per Method A.

3.6 PREPARATION OF TEST PANELS

The back side of test panels shall be protected to avoid excessive rusting during the following resistance tests. Panel edges, being subject of the investigation, shall not be protected by any additional action.

3.6.1 Substrate
(FLTM BJ 106-01, solvent wiped)

Ford Standard Steel Panels according to SAE J403 Steel or U-MA 18006 and welded test assemblies if not otherwise specified.

3.6.2 Wax Application

Prior to application, the wax must be stirred for 15 minutes.

Test Panels: The wax shall be applied as recommended by the supplier to provide a homogenous film.

Welded Assemblies: An excess of wax shall be sprayed to the vertically positioned assemblies to enable the wax creeping into the welded joint.

Two minutes after the wax application, the assemblies shall be turned into a horizontal position for drying.

3.6.3 Application Temperature 18 – 25 °C