CORROSION PROTECTIVE COATING, 4 WEEK RESISTANCE, SILVER/SILVER GRAY WSS-M21P45-A1

CORROSION PROTECTIVE COATING, 4 WEEK RESISTANCE, BLACK WSS-M21P45-A2

CORROSION PROTECTIVE COATING, 8 WEEK RESISTANCE, SILVER/SILVER GRAY WSS-M21P45-A3

CORROSION PROTECTIVE COATING, 8 WEEK RESISTANCE, BLACK WSS-M21P45-A4

1. SCOPE

The materials defined by these specifications are corrosion protective coatings over steel. These coating systems provide corrosion protection and color options and are intended for spring band hose clamps. These coatings are free of hexavalent chromium, nickel, lead and cadmium.

2. APPLICATION

These specifications were released originally for materials used for corrosion protective coatings over steel. They are intended for constant tension spring band hose clamps where a high level of corrosion protection is required.

2.1 SERVICE TEMPERATURE

The maximum continuous service temperature resistance is 200 °C.

3. REQUIREMENTS

Material specification requirements are to be used for initial qualification of materials.

3.1 APPROVED SOURCES

This specification requires the use of approved sources. Only the sources identified on the Ford Approved Source List (ASL) or WX 100 Fastener Standard can be used when this specification is listed on the drawing, CAD file, or other documents. The list of approved sources is located within Ford at www.mats.ford.com or available externally through a Ford Materials Engineer.

3.2 LICENSEE APPLICATOR QUALITY REQUIREMENTS

Applicators must follow coating manufacturer procedures and recommendations for chemical usage, equipment and processing.

3.3 MATERIAL PERFORMANCE

3.3.1 Raw Material Storage Stability

The material must be capable of being stored at 23 +/- 2 °C for 60 days without detrimental effect to the performance of the coated parts.

Date	Action	Revisions	Rev. 03
2015 08 27	Revised/ Released	See Summary of Revisions	S. Ryzyi, NA
2009 08 19	Revised	Updated paragraph 3.5.2, added paragraph 5	G. Weber
2004 09 20	Released	A1 and A2 Released A3 and A4 2015	A. Cockman, J Luther

Copyright © 2015, Ford Global Technologies, LLC
Licensee=/, User=,
Not for Resale,

Copyright Ford Motor Company
Provided by IHS Markit under license with FORD
No reproduction or networking permitted without license from IHS
Full document details: FORD WSS-M21P45-A1 2015
Documents Document Sharing Hub

3.3.2 Cleaning

Prior to coating, the parts shall be free of oil, scale, and similar foreign materials. The cleaning process shall have no detrimental effect on the substrate, including freedom from embrittlement.

3.3.3 Curing

These coatings are typically cured at 200 to 220 °C. Alternative cure temperatures may be used provided mechanical properties of the clamp are not affected. Parts must be sufficiently cured at the time of packing to withstand normal handling and shipping without marring.

3.3.4 Appearance

A1/A3 Uniform silver/silver gray
A2/A4 Uniform black

The coating shall be uniform in color and free from discontinuities when viewed without magnification.

Where part grounding is required to apply the finish the grounding point shall be on the tang of the clamp and shall not impact clamp performance.

3.3.5 Storage Life

Parts supplied shall still meet the specific requirements of this specification 6 months after receipt by Ford when stored at 5 to 28 °C with no direct heat or sunlight.

3.4 ADHESION

3.4.1 The cured coating shall withstand normal handling, storage and installation without flaking or peeling or other loss of adhesion.

3.4.2 Parts heated to 120 °C for 60 minutes shall not exhibit blistering, peeling, flaking or coating which can be removed by a filament type tape, such as 3M No. 898-2. The testing of coating quality by salt spray and/or determination of coating thickness will be performed on parts passing the adhesion test.

3.4.3 Hoseclamps may be used in 'Pre-Opened, Pre-Positioned' (POPP) applications; these are applications where the hoseclamp is glued to the hose to assist assembly.

After a 16 hour soak at a relative humidity of 95% min. the adhesion of the coating shall be sufficient to withstand a load of 34Kg applied to the tangs in a horizontal or radial direction and shall meet the following requirements:

3.4.3.1 There shall be no separation of the coating and substrate.

3.4.3.2 There shall be no separation between coating layers.

Copyright Ford Motor Company
Provided by IHS Markit under license with FORD
No reproduction or networking permitted without license from IHS
Full document details: FORD WSS-M21P45-A1 2015

Copyright © 2015, Ford Global Technologies, LLC
Licensee=/, User=,
Not for Resale,

Documents
Document Sharing Hub