

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS G-4525
		Former Designation: TMS-4525
TITLE: Corrosion Protective Coating for Use with Treated Wood		CURRENT REV No.: 1703
		DATE: March 2017
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<i>This specification may involve hazardous materials, equipment, and procedures. This specification does not purport to address all of the safety issues associated with its use. The user is responsible to consult appropriate safety and health practices and to determine the applicability of regulatory limits prior to use.</i>		

1.0 APPLICATION

This specification covers the requirements for a corrosion resistant, duplex coating system which combines an electroplated zinc and chromate substrate with an organic topcoat. This coating system must be free of hexavalent chromium. This finish is intended for use on ferrous fasteners and small parts used in contact with treated wood, such as ACQ (alkaline copper quaternary) and other commercially available wood treatments.

2.0 SCOPE

This specification covers the general coating requirements, part performance, quality, KCC, source approval and quality control, packing, shipping, and identification requirements, and designation on drawings.

2.1 Restricted Chemical Substances

Effective January 1, 2007, all product supplied to the requirements of this specification must comply with the requirements of the MPAPS B-50 specification.

3.0 REFERENCE DOCUMENTS

Unless otherwise specified, the latest issue of all referenced standards shall apply. The following standards, specifications and regulations are referenced in this specification.

Quality System Standard <i>ISO 9001 or TS-16949</i>	ASTM B 117
NAVISTAR Engr. Design Standard A-16	MPAPS B-50
NAVISTAR Supplier Packing and Shipping Std. D-13	
CFR Title 29, Part 1910	

4.0 GENERAL REQUIREMENTS

4.1 Coating Requirements

The zinc plate and chromate passivation treatment will have a thickness of 7.5 µm minimum, with a topcoat thickness of 10-12 µm. The topcoat is an organic barrier-type coating, which includes an integrated friction modifier to eliminate the need for sealers or post-coating lubricants.

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4.1.1 Appearance

Coated parts shall have a uniform tan appearance (unless other color specified on drawing), be thoroughly cured, and free from runs and sags. The coating shall not be oily or tacky to the touch.

4.1.2 Maximum Thickness on Threads

The coating will have no adverse effects upon production assembly and disassembly practices. The maximum thickness on threads is limited by the basic thread size and tolerances. After coating, the parts must pass the appropriate thread GO gages without sticking or binding.

4.2 Part Performance

4.2.1 Adhesion

Coated parts shall be tested for 100 hours min in 100% RH at 38°C (100°F), after 72 hours min aging at room temperature. After testing, parts shall show no evidence of blistering, flaking, peeling, or appearance changes.

4.2.2 Durability/Flexibility

For coated fasteners, samples must be able to survive 10 installation cycles in and out of treated wood without substantial coating loss. Coating shall withstand normal handling and storage conditions without flaking, chipping, or loss of adhesion.

4.2.3 Corrosion Resistance

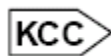
Coated parts will be exposed to neutral salt spray testing per ASTM B 117 for 1000 hr. Externally threaded fasteners will first be power driven into treated wood before testing. After testing, samples will show no base metal corrosion.

5.0 QUALIFICATION

Pre-production samples, accompanied by a certified laboratory report, indicating conformance to all requirements of this specification, shall be submitted to Truck Development and Technology Center for testing and approval prior to shipment of production parts.

5.1 KCC - Quality Control Plan

A Quality Control Plan for this product will be established by mutual agreement between Navistar and the supplier. Unless specific exception is noted, the following key control characteristics (KCC), where applicable*, shall be included in the plan as features for management by statistical process control**.



1. Coating Thickness
2. Corrosion Resistance

* Other characteristics for inclusion in the control plan may be specified on the engineering drawing and/or purchase order.

** See NAVISTAR Engineering Design Standard A-16.

6.0 SOURCE APPROVAL AND QUALITY CONTROL

6.1 Supplier Requirements

All suppliers to NAVISTAR are required to be registered to ISO 9001 Quality System Requirements. NAVISTAR will also accept TS-16949 registration as long as the supplier can also fulfill all AIAG

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