

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS G-4516
		Former Designation: TMS-4516
TITLE: Corrosion Preventive Compound		CURRENT REV No.: 1612
		DATE: Dec.2016
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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 corrosion preventive materials used to protect newly machined surfaces and/or unpainted parts from corrosion during outside storage and/or ocean transit. Some of these materials or Types are also used for underbody coating and to inhibit galvanic corrosion between dissimilar metals. These materials consist of coated and uncoated adhesive dielectric tapes and primer-type paints or thin, waxy, self-healing films. Types I – V are suitable for application by spraying, dipping, or brushing at temperatures of 10-35°C (50-95° F). Type VI application is from a roll of tape-like material or pre-cut shapes.

2.0 SCOPE

This specification covers the general requirements, property and performance requirements, qualification, and source approval and quality control requirements for five types of corrosion preventive compounds.

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 Specifications, Standards, and Regulations are referenced in this specification.

Quality System Standard ISO-9001 or TS-16949	MPAPS A-1044
NAVISTAR Supplier Packing and Shipping Std. D-13	MPAPS G-5
CFR 40, Part 1910	MPAPS GT-Paint
NAVISTAR Engr. Dwg. WA00032698	ASTM D88
NAVISTAR Parts List F100011133	ASTM D93
NAVISTAR Parts List R100011133	ASTM D1748
NAVISTAR MPAPS B-50	ASTM D4585
MPAPS A-1037	SAE J1959

4.0 GENERAL REQUIREMENTS

4.1 Description

Six types of corrosion preventive compounds are provided. See General Information for description.

Type I - General purpose, solvent borne coating for outdoor storage

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- Type II - Same as Type I with Water Displacing Additive (for fasteners)
- Type III - Same as Type I with controlled viscosity for faster drying
- Type IV - Pigmented (black) waterborne coating with improved corrosion resistance. Applies To IV-A and IV-B.
- Type V - A solvent borne waxy coating applied by warm spray equipment.
- Type VI - An adhesive, dielectric, sealing film or tape applied between dissimilar metals

4.2 Liquid Properties (Types I – V only):

4.2.1 Color

Types I, II, III, V - Shall be amber
Type IV - Shall be pigmented black

4.2.2 Flash Point - ASTM D 93

Shall be 38° C (100° F) minimum

4.2.3 Viscosity (Type III Only): ASTM D 88

Shall be 180-240 S.U.S. at 38° C (100° F)

4.3 Dry Film Properties (Types I – V only):

When applied by spray, dip or brush at temperatures between 10 and 38°C (50 and 100°F), the dry film shall meet the following requirements:

4.3.1 Thickness (Types I – V):

Shall be 0.025 mm (0.001 in) minimum

NOTE 1: Minimum dry film thickness applies to the film over the surface profile/texture. Coarser surfaces - forgings, castings, peened surfaces, etc., may require greater wet film thickness and/or multiple coats to achieve the minimum required dry film thickness.

NOTE 2: If control of the maximum thickness is required, for ease of assembly or cleaning prior to assembly/painting or for ease of removal at port of debarkation, it is the responsibility of the controlling Navistar facility to designate the maximum film thickness.

4.3.2 Coverage - Types I, II, III - Shall be 22 m²/L (900 ft²/gal) minimum

Type IV-A (Hunting) - Shall be 7 m²/L (280 ft²/gal) minimum

Type V - Shall be 7 m²/L (280 ft²/gal) minimum

4.3.3 Intercoat Adhesion - Type IV-A only

Parts or panels coated with Type IV-A will demonstrate adhesion to the substrate when tested per MPAPS GT-Paint method 5A and shall be compatible with International chassis paints as listed in MPAPS G-5.

4.3.4 Air Drying Time (Types I – V)*

Type III

0.5 Hour minimum

Types I, II, IV-A

1 Hour minimum

Type V

2 Hours Minimum

* Minimum drying time to obtain the corrosion protection and durability indicated under Property and Performance Requirements.

4.3.5 Removal - Types I, II, III, V, and VI

Shall be removable by petroleum solvents or vapor degreaser.

4.4 Property and Performance Requirements

Where applicable, tests shall be performed on panels having a minimum film thickness of 0.020 mm (0.001 in). Panels will be aged prior to test 7 days at room temperature or 72 hours at 49°C (120°F). Type VI materials will be tested as panel assemblies consisting of the barrier tape between metal panels representing the dissimilar metals which will be used in the production application.

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