

NAVISTAR INC.		
TMS (TRUCK MATERIAL SPECIFICATION)		NUMBER: TMS-6918
TITLE: Sealer, Assembled Parts		CURRENT REV No.: 0912
		DATE: December 2009
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	SUPERSEDES: Rev. B-1, August 2001
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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>		
Change Notice: Replaced "International Truck and Engine Corporation" with "Navistar, Inc." per corporate directive; added CEMS B-50 requirement; editorial changes.		
Reference: File 30-1	Keywords: Sealer	

1.0 APPLICATION

This specification outlines the requirements for a liquid sealant material which is used during the assembly of studs, threaded pipe connections, and for coating of various solid gaskets. This product is intended to prevent seepage and seizure of cast iron and aluminum parts.

2.0 SCOPE

This specification covers the general requirements, property and performance requirements, quality, source approval and quality control.

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 CEMS 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 ISO 9001 or TS-16949	NAVISTAR CEMS B-50
CFR Title 29, Section 1910	NAVISTAR TMS-9543
NAVISTAR Manufacturing Std. MS-D-13	Military Specification, MIL-S-45180
NAVISTAR Eng. Design Std. A-16	

4.0 GENERAL REQUIREMENTS

4.1 Material

This compound shall be a fuel, oil and water resistant material consisting of polymerized vegetable oils, modified resin, fillers and solvents. While being resistant to aliphatic hydrocarbons, it is not resistant to alcohol, aromatic hydrocarbons and acetate esters.

4.2 Color

Shall be black.

4.3 Toxicity

Shall not be considered a toxic hazard when used with proper industrial hygiene.

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DECEMBER 2009



Documents

Page 1 of 4
Document Sharing Hub

NUMBER: TMS-6918	TITLE: Sealer, Assembled Parts	REVISION: 0912
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4.4 Property And Performance Requirements

This material shall meet the requirements and be tested in accordance with MIL-S-45180, Type II.

4.4.1 Viscosity

Required: 3000-30,000 poises.

4.4.2 Weight

Required: $1460 \pm 48 \text{ kg/m}^3$ ($12.2 \pm 0.4 \text{ lbm/gal}$).

4.4.3 Solids Content

Required: $85 \pm 3\%$.

4.4.4 Volatile Content

Required: $13.0 \pm 2\%$.

4.4.5 Ash Content

Required: $48 \pm 5\%$.

4.4.6 Flash

Required: Shall be not less than 10°C (50°F).

4.4.7 Solubility

	<u>% Maximum</u>
Required: Aromatic Fluid TT-S-735 Type II	10
Aromatic Fluid TT-S-735 Type III	9
Ethylene Glycol 0-A-548 Type I	8
Distilled Water	6

4.4.8 Flexibility

Required: Shall not crack when flexed at $-35 \pm 1^\circ\text{C}$ ($-30 \pm 2^\circ\text{F}$).

5.0 QUALIFICATION

Material and processes submitted for approval to this specification shall include the following:

5.1 A detailed, signed test report documenting testing to this specification per TMS-9543.

5.2 Test coupons or photographs showing failure modes for each test.

5.3 The complete procedure used for preparing and curing materials for test, especially surface preparation and condition of the test specimens.

5.4 Questions regarding qualification requirements, reports and test materials may be directed to:

Manager of Non-Metallic Materials
Materials Engineering and Technology
Truck Development and Technology Center
PO Box 1109
Fort Wayne, IN 46801

6.0 QUALITY

This compound shall be a smooth and homogeneous mixture, free from lumps, caked material and particles of foreign matter.

6.1 Storage

When stored in original containers at 16°C (60°F) to 30°C (85°F), it shall have a minimum of two years shelf life.

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