

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS F-32
		Former Designation: CEMS-D31
TITLE: Sealant Coated Pipe Thread Fittings		CURRENT REV No.: 1611
		DATE: Nov. 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 applies to standard parts in sections MPAPS S-L and MPAPS S-M of Navistar Engineering Standard Parts specifications and other threaded pipe fittings. The pre-applied sealant aids in providing a leak-proof joint.

2.0 SCOPE

The specification covers Navistar requirements for externally threaded pipe fittings coated with a pre-applied sealant. The applicability of coated fittings to critical systems requiring special internal cleanliness should be thoroughly verified before use.

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	NAVISTAR MPAPS B-1
CFR Title 29, Part 1910	NAVISTAR MPAPS B-50
NAVISTAR Supplier Packing and Shipping Std. D-13	NAVISTAR MPAPS B-21
NAVISTAR Engineering Design Std A-16	NAVISTAR MPAPS B-32
NAVISTAR MPAPS S-L 1.101-GS/PL	
NAVISTAR MPAPS S-L 61.101-GS/PL	
NAVISTAR MPAPS S-L 7.101-GS/PL	
NAVISTAR MPAPS S-L 9.101-GS/PL	
NAVISTAR MPAPS S-M 1.101-GS/PL	
NAVISTAR MPAPS S-M 2.101-GS/PL	
NAVISTAR MPAPS S-M 4.101-GS/PL	
NAVISTAR MPAPS S-M 5.101-GS/PL	

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4.0 REQUIREMENTS

4.1 Sealant

4.1.1 The purchaser will assign a color to each approved sealant to identify the manufacturer.

4.1.2 The sealant will not be corrosive to ferrous or non-ferrous metals. It will not have a degrading effect on the corrosion resistance of the basic finish of the fitting.

4.1.3 The sealant shall be capable of being used with both metal and plastic materials.

4.1.4 The fully cured sealant shall be insoluble in water, diesel fuel, 50% mix of water and glycol, oil, automatic transmission fluid, power steering fluid and other chemicals commonly encountered in assembly and use of air brake system components. Exposure to these materials shall not affect the ability of the sealant to meet specified performance requirements.

4.2 Sealant Coated Fittings

Coated fittings will meet the requirements of this specification in each of the four following conditions:

- (a) as received;
- (b) after at least 3 years storage in shipping containers at temperatures up to 35°C;
- (c) after at least 120 hours exposure at $-55 \pm 5^{\circ}\text{C}$;
- (d) after at least 120 hours exposure at $120 \pm ^{\circ}\text{C}$.

4.2.1 Extent Of Coating

Prior to sealant application, inspect the threads to be sure they are not damaged and do not contain slivers, burrs, dirt, or other contamination. The sealant will be uniformly applied around the circumference and along the length of the external threads of the fitting only. The sealant will be dry to the touch. The first one-half to two lead threads of the coated fitting will be substantially free of sealant. Substantially means a small quantity of sealant on the lead threads is permissible provided startability of the coated part into the mating pipe thread is not adversely affected. From the start location, a minimum of the next four threads shall be coated. The sealant shall be applied so that approximately 50% of the thread depth is filled with sealant. Sealant should not protrude beyond the major thread diameter.

4.2.2 **Coating Weight.** The total weight of sealant per fitting will conform to the limits shown.

Nominal Size and Thread Pitch *	Weight of Dry Sealant per Fitting (mg) **	
	Brass Fittings	Steel Fittings
1/16 – 27	11 – 27	-
1/8 – 27	15 – 30	20 – 40
1/4 – 18	30 – 60	40 – 80
3/8 – 18	60 – 100	80 – 120
1/2 – 14	120 – 200	140 – 240
3/4 – 14	140 – 250	200 – 280
1 – 11-1/2	200 – 340	240 – 380
1-1/4 – 11-1/2	240 – 380	280 – 420

* Dryseal American Standard Taper Pipe Thread (NPTF).

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