

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS K-6907
		Former Designation: TMS-6907
Sealer, Butyl Rubber, Gun Grade		CURRENT REV No.: 1704
		DATE: Apr. 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 two types of gun grade sealers compounded of polymerized butyl elastomer and resins. These sealer types are generally used as joint sealers on the fire wall and/or in cab body joints of steel and/or aluminum cabs.

2.0 SCOPE

This specification covers general requirements, composition, physical properties, 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 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 ISO 9001 or TS-16949	MPAPS B-50	MPAPS G-9013
CFR Title 29, Section 1910	FMVSS 302	MPAPS G-5
NAVISTAR Supplier Packing and Shipping Std. D-13	SAE J243	MPAPS GT-31
NAVISTAR Eng. Design Std. A-16	SAE J250	MPAPS P-9543

4.0 GENERAL REQUIREMENTS

4.1 Description

The material is a one-part sealant containing butyl rubber, which produces a tough rubbery seal that retains its adhesion and flexibility throughout its service life.

Type I is a UV stable sealant.

Type II is not UV stable and is intended for use only in those applications where UV stability is not a requirement.

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4.2 Composition

This material shall be compounded with a minimum of 80% solids, made up of polymerized butyl elastomer, resins, inert pigment and fibers, with the addition of solvents as required. Materials intended for use prior to entering the top-coat booth shall not contain any chemicals that may adversely affect the paint application process.

4.3 Physical Properties

4.3.1 Consistency

Shall be a smooth paste that is easily dispensable at 21°C (70°F) and above, being capable of application from a drum with a follower plate.

4.3.2 Viscosity

4.3.2.1 Method: Pressure Flow Method per SAE J243.

4.3.2.2 Required: Report value.

4.3.3 Shrinkage

4.3.3.1 Method: Fill a metal cylinder 47.6 mm (1-7/8 in) diameter and 12.7 mm (1/2 in) deep and test aged 96 hours at 82°C (180°F). Perform in triplicate.

4.3.3.2 Required: There shall be only slight concavity in center mass and shall not pull away from edge of the cylinder.

4.3.4 Service Temperature

Shall remain flexible and show no loss of adhesion or cracking when exposed to service conditions of -29 to 82°C (-20 to 180°F).

4.3.4.1 Cold Resistance

4.3.4.1.1 Method: Methods 1 and 2 per SAE J250 performed at -40°C. Perform in triplicate.

4.3.4.1.2 Required: Shall not crack, show signs of embrittlement or loss of adhesion.

4.3.4.2 Heat Stability

4.3.4.2.1 Method: Stability Method 2 per SAE J250 applied to a painted panel.

4.3.4.2.2 Required: Shall not flow, crack, leach oil, lose adhesion, or emit offensive odors.

4.3.5 Water resistance

4.3.5.1 Method: Apply to a painted panel. Immerse separate panels vertically in water and 5% Sodium Chloride solution @ 72°C for 24 hrs.

4.3.5.2 Required: Shall not lose adhesion or dissolve.

4.3.6 Sag

4.3.6.1 Method: Apply sample along centerline of E-coat primed panels in a 3 x 25 x 200 mm (1/8 x 1 x 8 in) bead. Scribe panels to mark initial material location. Incline panel at a 90° angle with bead horizontal and hold for 48 minutes at 25°C (77°F). Measure any movement from scribe.

4.3.6.2 Required: Sealant/adhesive will flow a maximum of 3mm (1/8in).

4.3.7 Aged Adhesion

4.3.7.1 Method: Aged adhesion per SAE J250, except substitute -40°C for -29°C (-20°F) in the cycle.

4.3.7.2 Required: Shall fail cohesively, remain pliable, and shall not crack.

4.3.8 Odor

Shall not emit any offensive odors during testing and during service.

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