

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS L-6510
		Former Designation: <i>TMS-6510</i>
Urethane Foam, Low Permeability		CURRENT REV No.: 1610
		DATE: Oct. 2016
WRITTEN/EDITED BY: S. Brailey	APPROVED BY: R. Goluch	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>		

1.0 APPLICATION

This specification covers a flexible semi-closed cell urethane foam suitable for use as a seal in automotive heater-air conditioning systems where restriction to air flow is desired.

2.0 SCOPE

This specification covers the general requirements, property and performance requirements, and 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 Specifications, Standards, and Regulations are referenced in this specification.

Quality System Standard ISO 9001 or TS-16949
CFR Title 29, Part 1910
NAVISTAR Supplier Packing and Shipping Std. D-13

NAVISTAR Engineering Design Std A-16
NAVISTAR MPAPS B-50
ASTM D 3574

4.0 REQUIREMENTS

4.1 Material

Shall be a polyurethane of essentially closed cell construction with no cracks, craters or solid areas. Color shall be charcoal gray unless otherwise specified.

4.2 Dimensional Tolerances

Thickness, width and length tolerances shall be stated on the part drawing.

4.3 Property and Performance Requirements

The following properties shall be determined by the methods indicated in ASTM D-3574, unless otherwise specified.

4.3.1 Density

Shall be 28.8 kg/m³ (1.8 lbm/ft³) minimum.

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4.3.2 Tensile Strength (Die A)

Shall be 69 kPa (10 psi) minimum.

4.3.3 Elongation

Shall be 125% minimum.

4.3.4 Tear Resistance

Shall be 1.75 N/cm (1 lbf/in) thickness, minimum

4.3.5 Compression Set (Method D)

Shall be 20% maximum after 22 hours at 70°C (158°F) with 75% constant deflection.

4.3.6 Water Absorption

Samples 25 x 25 x 150 mm (1 x 1 x 6 in) shall be weighed, compressed 75%, and then submerged in a tank under 125 mm (5 in) of water for 24 hours. After the 24 hours immersion at $22 \pm 20^\circ\text{C}$ ($72 \pm 5^\circ\text{F}$) remove and allow to drain horizontally [on 25 x 150mm (1x6in) surface] for 5 minutes on a hardware cloth. Reweigh and calculate average absorption for three samples.

5.0 QUALITY

All product supplied shall be clean and free from dirt, oils, sharp edges, or defects harmful to product performance.

6.0 QUALIFICATION

Engineering qualification of sources is required in advance of production shipments. Samples shall be accompanied by test data certifying that all requirements of the specification have been met.

6.1 Quality Control Plan

A Quality Control Plan for products supplied to the requirements of this specification will be established by mutual agreement between NAVISTAR and the supplier. Unless specific exception is noted, the following characteristics, where applicable*, shall be included in the plan as features for management by statistical process control.**



* 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

7.0 SOURCE APPROVAL AND QUALITY CONTROL

7.1 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 PPAP (Production Part Approval Process) documentation and approval requirements. Suppliers must

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