

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS L-6500
		Former Designation: TMS-6500
TITLE: Cellular Polyurethane, Integral Skin		CURRENT REV No.: 1702
		DATE: Feb. 2017
WRITTEN/EDITED BY: W. Cook	APPROVED BY: R. Goluch	SUPERSEDES: Rev. 0810 – October 2008
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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 molded cellular polyurethane foam which forms an integral skin and is suitable for use in certain interior truck trim applications.

2.0 SCOPE

This specification covers the general requirements, property and performance requirements, quality, quality control, and source approval for the coating, the integral skin, and the cellular polyurethane foam.

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	ASTM D 3574	ASTM D 2247
NAVISTAR Supplier Packing and Shipping Std. D-13	ASTM D 624	ASTM D 412
CFR Title 29, Part 1910	ASTM D 2240	ASTM D 653
FMVSS 302	ASTM D 3359	ASTM D 47
NAVISTAR MPAPS P-9544	ASTM D 3884	ASTM G 53
NAVISTAR MPAPS B-50	SAE J323	SAE J861
NAVISTAR MPAPS P-9543	ASTM D 429	

4.0 GENERAL REQUIREMENTS

4.1 Color, Finish, and Texture

Color shall be specified on the engineering drawing for each part number. Color must match Navistar Paint Chip Color Standards (available from Materials Engineering). Color, finish, and texture of parts supplied to this specification must match the approved pre-production samples on file in the Industrial Design Department.

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4.2 Coating

Thickness, min: 0.25mm (0.01 inch)

Color: To match Navistar color paint chip for the color specified on the engineering drawing.

4.3 Integral Skin

Thickness: 6.4 ± 1 mm ($0.25 \pm .04$ inch)

Pigmented to provide 90% color match to the color specified on the part drawing.

4.4 Cellular Polyurethane Elastomer

Density, (ASTM D 3574, Method A) Core Sample: 10 kg/m³ (0.62 lbs/ft³) minimum

Color: Pigmented to provide 90% color match to the color specified on the part drawing.

4.5 Property And Performance Requirements

Material supplied shall meet all requirements of this specification unless otherwise specifically designated on the engineering drawing.

4.5.1 Finished Parts

4.5.1.1 Hardness ASTM D2240, Method A:

Required: 50 ± 5 points

4.5.1.2 Dry Heat Age - ASTM D 3574 Test K except as indicated below:

Short term test - 1 hour at 100°C (212°F)

Long term test - 168 hours at 65°C (150°F)

Required: There shall be no blistering, softening, or discoloration.

Hardness shall not increase by more than 10 points.

4.5.1.3 Adhesion to Inserts – ASTM D 429 Method B, use for metal or plastic inserts. Test before and after Dry Heat Age in section 4.5.1.2.

Required: 600 N/m(width), foam failure only, adhesive failure shall be considered as failing this test.

4.5.2 Integral Skin and In-mold Coating

Properties shall be measured on a film cut from a molded part such that the thickness of the skin and included foam is 2.5 mm (0.1 inch) $\pm$ 0.25 mm (0.01 inch).

4.5.2.1 Tensile Test - ASTM D 412, Method 4, Die A:

Required: Tensile Strength: 1.2 MPa (180 psi) min

Elongation: 80% min

4.5.2.2 Tear Resistance - ASTM D 624, D14 C:

Required: 4.4kN/m (25 lbf per inch) minimum

4.5.2.3 Low Temperature Resistance - SAE J323, Method A, -32°C (-25°F)

Required: Pass

4.5.2.4 Abrasion Resistance - ASTM D 3884, CS #10 Wheel, 500 gm load, 500 cycles

Required: No appreciable loss of grain, texture, or any color change.

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