

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS D-7117
		Former Designation: TMS-7117
TITLE: Foam Composite Trim Panel		CURRENT REV No.: 1610
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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 chemically bonded composite trim panel consisting of a foam composite core with a woven backing material and decorative fabric facing suitable for headliners and back panels over a temperature range of -30 to + 180°F.

2.0 SCOPE

This specification covers the general requirements for the foam composite core and performance requirements of the finished panel.

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 903
CFR Title 29, Part 1910	ASTM D D3574
NAVISTAR Supplier Packing and Shipping Std. D-13	
NAVISTAR Engineering Design Std. A-16	
NAVISTAR MPAPS B-50	
NAVISTAR MPAPS P-9544	

4.0 GENERAL REQUIREMENTS

4.1 Construction

4.1.1 Headliners

The composite shall consist of the following layers:

4.1.1.1 Backing Material

4.1.1.2 Fiberglass mat (in designated areas)

4.1.1.3 "Firm" foam

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4.1.1.4 Fiberglass mat (in designated areas)

4.1.1.5 Backing material

4.1.1.6 "Soft" foam

4.1.1.7 Outer fabric

4.1.2 Back Panels

The composite shall be the same as for headliners except the fiberglass mats may be omitted.

4.1.3 Core

The foam composite core shall consist of:

4.1.3.1 A firm inner layer of resin impregnated polyurethane foam as described in Table 1.

4.1.3.2 A soft outer layer of resin impregnated polyurethane foam as described in Table 1.

4.1.3.3 These resins shall be non-toxic, non-malodorous resin binders suitable for chemical bonding. See Table 1 for resin content.

4.1.3.4 A 25 x 14 woven polyester backing material to provide flexible support and protection prior to installation in the vehicle.

4.1.3.5 When reinforcement is required, such as for headliners, a 20 mil non-woven, random pattern, glass fiber filament mat shall be utilized in areas designated on the part drawing.

4.1.4 Outer Layer The decorative outer layer shall consist of a fabric covering meeting the requirements of the International specification as indicated on the part drawing.

TABLE 1

Foam Properties (Prior to Fabrication)

	<u>Inner Layer</u>	<u>Outer Layer</u>
Density, lbm/ft ³	1.8	1.5
Thickness, in + 1/16	1/4	1/4
ILD on 4 in thickness		
25%	80	---
65%	120	60
Support Factor 65/25	1.5	1.5
Resilience (% Rebound)	50	50
Tear Resistance, lbf/in		
per ASTM D3574	2.0 - 2.5	1.5 - 1.8
Static Fatigue per ASTM D3574, Procedure 1 (75% deflection, 17 hrs)		
% Loss in 25% ILD	<30	<30
% Loss in Thickness	<5	<5
Resin Content, %	150 + 20	100 + 20

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