

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS D-7113
		Former Designation: TMS-7113
TITLE: Woven or Knit Fabric, Interior Trim - Parts 1 & 2		CURRENT REV No.: 1610
		DATE: Oct. 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>		

Part 1

1.0 APPLICATION

This specification covers a class of woven or knit fabrics suitable for use in truck seat upholstery and/or interior trim.

2.0 SCOPE

Part 1 of the specification covers the general requirements for fabric properties, quality, identification and qualification for all fabrics covered by MPAPS D-7113. Part 2 covers the individual characteristics (composition, yarn, etc.) for a number of specific fabrics (Type A, Type B, etc.) of this class.

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 and standards are referenced in this specification:

Quality System Standard ISO 9001 or TS-16949	AATCC Test Method 8	ASTM D 123
NAVISTAR Engineering Design Std A-16	AATCC Test Method 15	ASTM D 751
NAVISTAR Supplier Packing and Shipping Std. D-13	AATCC Test Method 16A	ASTM D 1682
FMVSS 571.302	AATCC Test Method 104	ASTM D 1683
NAVISTAR MPAPS P-9544	AATCC Test Method 135	ASTM D 2262
NAVISTAR MPAPS GT-31	SAE J1885	ASTM D 3597
NAVISTAR MPAPS D-7028	SAE J855	ASTM D 3884
NAVISTAR MPAPS P-9543	SAE J860	
NAVISTAR MPAPS B-50	SAE J882	

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Part 1

3.1 Definitions

For definition of terms relating to textiles and fabric products, see ASTM D 123.

4.0 GENERAL REQUIREMENTS (All Fabrics)

All materials supplied shall meet requirements of Part 1 and the individual requirements for the type as shown in Part 2. Any material used in a bonded, laminated or dielectric application shall meet the composite requirements of MPAPS D-7028. Any materials used in seat assembly shall meet the requirements of MPAPS P-9534.

4.1 Description

The requirements for yarn composition, fiber blend, finished weight*, and finish shall be as indicated in the appropriate section (Type A, Type B, etc.). The color, as specified on the drawing, shall comply with the using Plant's Inspection Department color shading and be so identified on each roll. The color, weave, and finish shall match the standard samples on hand in the NAVISTAR Industrial Design Department. The backing shall be latex or resin, and shall be non-tacky from 10°C (50°F) to 55°C (130°F). The finished fabric must be dielectrically and chemically bondable.

* Finished weight shall be defined as the weight of the fabric plus all supplemental coatings, finishes and/or backings.

4.2 Dye Method: Fabric shall be piece-dyed, unless otherwise specified.

4.3 Seam Strength: ASTM D 1683: The joining seam shall resist slippage of any one yarn or thread. There shall be no fractures at the sew-line in any material. This requirement does not apply to unbacked woven and knitted fabrics.

4.4 Filler Bow (Bias): The degree of filler bow or bias (misalignment at right angles to selvage) shall not exceed 13 mm (1/2 in) from selvage to center (below and above the horizontal combined) and shall not exceed 25 mm (1 in) from selvage to selvage (below and above the horizontal combined). This requirement does not apply to unbacked woven and knitted fabrics.

4.5 Mounting Holes: Fastener holes that are punched in the part for mounting or retention purposes shall be clear of frayed material. To prevent fraying in punched hole area, a heat process may be used to melt the frayed material and hold it in place. Any process used to accomplish this operation shall not cause an objectionable appearance problem.

4.6 Roll Requirement: Material shall be woven in such a manner that wrinkles or fullness shall not occur between edges when the material is rolled out on a flat surface and in a straight line for a minimum of 17.4 m (19 yd). Material shall be rolled with the back side out. Minimum and maximum roll length shall be agreed upon by the fabric supplier and seat covering plant. Each roll shall contain no more than one imperfection per 7.3 m (8 yd). Imperfections shall be tagged and a minimum of 0.11 m (1/8 yd) allowance made for each imperfection, unless such imperfection is greater than 0.11 m (1/8 yd); then, full allowance shall be made. No roll shall contain more than three (3) pieces; no piece shall be less than 6.4 m (7 yd) in length. A splice or cut shall be considered an imperfection. All pieces in a spliced roll shall be an exact match for color shade.

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Part 1

4.7 Abrasion: ASTM D 3884 Test using Rotary Platform Double Head Method

After 5,000 cycles under 250 gram load using CS-17 abrasive wheels, there shall be no appreciable color change of the abraded surface and no visible yarn rupture shall be evident. Types G, H, and shall be tested to 500 cycles.

4.8 Colorfastness to Rubbing: AATCC Test Method 8

Crocking test, performed wet and dry, shall show no appreciable staining of the contact fabric and have a minimum AATCC rating of four (4) dry and three (3) wet when compared with the AATCC Color Transference Evaluation Chart.

4.9 Bleeding and Perspiration: AATCC Test Method 15

The contact fabric shall remain virtually unstained and test sample shall show no apparent change in color.

4.10 Water Spotting: AATCC Test Method 104

Upon drying, the fabric shall show no evidence of spotting.

4.11 Accelerated Weathering: MPAPS GT-31, Zone B and Zone C

All materials shall qualify to one of the following tests:

4.11.1 Xenon Arc:

4.11.1.1 Method A:

Zone B - Interior parts, which are exposed to direct sunlight, under glass, shall be tested for a minimum of 640 kj for materials.

Zone C - Materials that receive indirect light such as the back panel, overhead console, headliner or sleeper components shall be tested for a minimum of 225 kj.

4.11.1.2 Method F: Interior parts which are exposed to sunlight, under glass, shall be tested for a minimum of 1000 kj.

4.11.2 Required (Either Method): There shall not be any sign of color alteration greater than ΔE of 3, plasticizer migration, decreased pliability or tackiness after exposure.

4.12 Flammability Resistance:

Material, parts, and/or composites parts supplied to this specification shall conform to and be certified by the supplier to meet the requirements of the Federal Motor Vehicle Safety Standard No. 302 -- Flammability of Interior Materials, and all requirements of MPAPS P-9544. A Report conforming to the requirements of MPAPS P-9543 will be provided.

5.0 QUALITY (All Fabrics)

Material shall be free from objectionable odor, have flexibility necessary for good tailoring, and shall be uniform as to quality, weave, color and finish during the entire period in which the fabric is purchased to this specification.

5.1 Identification (All Fabrics)

Back of material shall bear manufacturer's initials or trademark, with the month and year of fabrication, equally spaced a minimum of five times across the width and linear spacing of not more than 30 cm (12 in).

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Part 1

6.0 QUALIFICATION

Engineering qualification of sources is required in advance of production shipments. Production samples shall be at least 9.1 m (10 yd) of full width material and shall be submitted for engineering tests. Samples shall be accompanied by test data certifying that all requirements of the specification have been met. Suppliers shall submit samples for approval of finish, luster, color and appearance to the Navistar Industrial Design Group. Upon approval, styling master samples denoting the minimum level of acceptable appearance quality shall be developed and retained by the supplier and the quality department of each using NAVISTAR facility.

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 maintain their certification with an accredited registrar and must furnish copies of registration certificates to their Corporate Buyer upon request.

7.2 Approval

Parts supplied against contracts or purchase orders citing this specification shall be equivalent in all respects to those samples which were approved by the purchaser. No changes in formulation or processing practices are permitted without approval. In the event that changes in material, properties, processing practices, construction, color, or labeling of the product are required, the supplier shall notify NAVISTAR Materials Engineering and Purchasing and Supplier Development of the proposed change(s). Test data indicating conformance to all requirements of this specification, test samples, and new or amended or updated Material Safety Data Sheet(s) (MSDS), in accordance with CFR Title 29, Part 1910 shall be submitted with the request for change.

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