

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS L-6008
		Former Designation: TMS-6008
TITLE: Masticated Rubber Sheet		CURRENT REV No.: 1707
		DATE: July 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 the requirements for five types of a black, masticated, rubber material rolled or pressed into flat sheets suitable for mud flaps, splash shields, and similar parts. Type I is a material composed of 60% post-industrial recyclate from the tire industry and 40% post-consumer tire recyclate. Type IA is made with 2-ply polyester/nylon fabric and is also composed of 60% post-industrial recyclate from the tire industry and 40% post-consumer tire recyclate. Types II and III are materials composed of 90% post-consumer tire recyclate. Type IV is a material composed of 90-100% post-industrial recyclate from the tire industry and 0-10% post-consumer tire recyclate. Type V is a thermoplastic elastomeric material that is a blend of recycled rubber and recycled LDPE that can replace Type I in many applications but is stiffer than that material. It can also be thermo formed. In most cases, these materials may be used interchangeably but engineering should evaluate changes in the materials to ensure that the new one meets the application requirements. Type VI is a 65-70% post-industrial recyclate (20 mesh crumb rubber) and 30-35% TPE.

2.0 SCOPE

This specification covers the property and performance requirements, dimensional tolerances, source approval and quality control, identification and shipping, and designation on drawings.

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 <i>ISO 9001 or TS-16949</i>	CFR Title 29, Section 1910	ASTM D 624
NAVISTAR Supplier Packing and Shipping Std. D-13	ASTM D 412	ASTM D 1171
NAVISTAR MPAPS B-50	ASTM D 518	ASTM D 2137

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4.0 GENERAL REQUIREMENTS

4.1 Original Properties:

Original Properties	Test Method	Type I	Type IA	Type II	Type III	Type IV	Type V	Type VI
Tensile Strength [MPa/psi] min		Die C	Die C	Die C	Die C	Die C	Die C	Die C
Parallel to Grain Flow	ASTM D 412	4.8/700	10	5.0/725	3.3/475	4.8/700	4.8/700	4.3/620
Perpendicular to Grain Flow	ASTM D 412	2.1/300	5.5	4.0/575	2.9/420	2.6/375	4.0/580	5.4/780
Tear Strength [kN/m / lbf/in], min		Die B	Die B	Die C	Die C	Die B	Die C	Die C
Parallel to Grain Flow	ASTM D 624	21/120	50	25/145	16/90	26/150	38/216	29/168
Perpendicular to Grain Flow	ASTM D 624	44/250	70	28/160	26/150	52/250	35/200	33/187
Elongation		Die C	Die C	Die C	Die C	Die C	Die C	Die C
Parallel to Grain Flow	ASTM D 412	15%	15	140%	380%	25%	100%	220%
Perpendicular to Grain Flow	ASTM D 412	40%	20	125%	356%	50%	100%	290%
Hardness ±5 pts	Shore A	80	90	75	60	80	84	80
Specific Gravity	Shall be 0.90 to 1.30 (all Types)							

4.2 Heat Aged Properties:

Heat age at 70° C (158° F) for 70 hours.

4.2.1 Change In Tensile Strength

Shall be 25% max when tested in either direction.

4.2.2 Change In Elongation

Shall be 25% max when tested in either direction.

4.2.3 Change in Hardness

Shall be 10 points Shore A max.

4.3 Low Temperature Properties: ASTM D 2137, Method A

Shall not fail when tested at -40° C (-40° F) in either direction.

4.4 Ozone Resistance(Types I, IA, II, and III only): ASTM D 518, Method B

50 Hours At 38° C (100° F) In Ozone Concentration of 100 pphm.

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