

INTERNATIONAL TRUCK AND ENGINE CORPORATION		
(TMS) TRUCK MATERIAL SPECIFICATION		NUMBER: TMS-6501
TITLE: Molded Seats, Urethane Foam		REVISION: H-1
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	DATE ISSUED: 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>		
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Reference: File 30-16B	Keywords: Urethane Foam; Molded Seats	

1.0 APPLICATION

The material covered by this specification is an expanded cellular polyurethane foam of a polyether type with density required for the manufacture of molded seats and seat backs.

2.0 SCOPE

This specification covers the general requirements, property and performance requirements, quality, identification, quality control, and certification for two interchangeable foam products. Approved sources and quality control are included.

Type I	Heat Cured - Conventional
Type II	Cold Cured - High Resilient

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 QS-9000 (ISO 9001)	ASTM D 3574
INTERNATIONAL IQR Quality Standard	FMVSS 302
INTERNATIONAL Manufacturing Standard D-13	INTERNATIONAL TMS-9544
CFR Title 29, Part 1910	

4.0 GENERAL REQUIREMENTS

4.1 Surface Condition

Molded to contour parts shall be free from any surface crust which could come into contact with the trim or seat covering material.

4.2 Dimensional Tolerances

Height, width, length, and curvature tolerances shall be so stated on the applicable drawing for each part.

4.3 Property And Performance Requirements

All tests shall be performed in accordance with ASTM D-3574, Testing of Flexible Cellular Materials, unless otherwise specified. Properties are the same for both type I and II, unless otherwise noted.

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AUGUST 2001

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4.3.1 Compressibility - Test B1

Shall be specified on applicable part drawing.

4.3.2 Tensile Strength - Test E

Shall be 82 kPa (12 psi) min from an average of three test specimens.

4.3.3 Elongation - Test E

Type I: Shall be 170% min

Type II: Shall be 130% min

4.3.4 Tear Resistance - Test F

Type I: Shall be 295 N/m (1.7 lbf/in) width min

Type II: Shall be 245 N/m (1.4 lbf/in) width min

4.3.5 Compression Set - Test D, 75% Compression

Shall be 20% max, measured after 30 minutes recovery.

4.3.6 Dry Heat Aging - Test K

Shall exhibit 20% loss max from original tensile strength.

4.3.7 Fatigue Test - Test I2, Procedure B, except as noted

Maximum allowable height loss shall be 5% of the original sample thickness, when tested as follows:

Back pads - Use roller force of 130 N (30 lbf)

Seats - Use roller force of 260 N (60 lbf)

4.3.8 Steam Autoclave Test - Test J2

Shall be 20% max loss from the original compressibility.

4.3.9 Solvent Resistance - 1 Hour Immersion in Petroleum Naptha

Shall show no visible signs of deterioration or surface stickiness.

4.3.10 Odor

Shall be inoffensive both wet or dry.

4.3.11 Staining

4.3.11.1 Method

RS sunlamp at a distance of 30 cm (12 in) for 96 hours in contact with light colored or vinyl coated fabrics.

4.3.11.2 Required

Shall not stain.

4.3.12 Flammability Resistance

Material and parts supplied to this specification shall conform to and be certified by the supplier to meet the requirements of Federal Motor Vehicle Safety Standard No. 302 - Flammability of Interior Materials, and all requirements of TMS-9544.

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