

INTERNATIONAL TRUCK AND ENGINE CORPORATION		
(TMS) TRUCK MATERIAL SPECIFICATION		NUMBER: TMS-6506
TITLE: Urethane Foam, Slush Molded		REVISION: C-1
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	DATE ISSUED: August 2001
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1.0 APPLICATION

This specification covers a molded polyurethane foam with metal mounting plate (or plates) molded in place covered with a slush molded plastisol skin which has a soft, supple feel and high resiliency. It shall be used on arm rests and similar applications.

2.0 SCOPE

This specification covers the general requirements, property and performance requirements, quality, control frequency, source approval and quality control, and packaging.

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 645
INTERNATIONAL IQR Quality Standard	ASTM D 412
INTERNATIONAL Manufacturing Standard D-13	ASTM D 1004
CFR Title 29, Part 1910	ASTM D 792
INTERNATIONAL TMS-9544	FMVSS 302

4.0 GENERAL REQUIREMENTS

4.1 Urethane Foam

4.1.1 Material

Shall be capable of being molded to a molded plastisol skin.

4.1.2 Structure

Shall have a homogeneous, medium-sized cell structure with no large voids or hard spots which would be evident by compression of the plastisol cover.

4.2 Plastisol Skin

4.2.1 Thickness, ASTM D-645, Method A

0.76 mm (0.030 in) minimum

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4.3 Finished Part

The color, pattern, finish, and gloss shall match approved master samples in the TDTC Industrial Design Department.

4.4 Property And Performance Requirements

4.4.1 Urethane Foam

4.4.1.1 Density

98 kg/m³ (6 lb/ft³) minimum

4.4.1.2 Volume Loss

After exposure for seven days in a recirculating hot air oven at 69-71°C (156-160°F), the foam shall exhibit a 1% volume loss maximum.

4.4.1.3 Compression Set

Expose for seven days in a recirculating hot air oven at 69-71°C (156-160°F). Compress to 50% constant deflection at 69-71°C (156-160°F) for 22 hours. Allow to recover at room temperature for 1/2 hour. Foam shall exhibit 25% compression set maximum.

4.4.2 Plastisol Skin

4.4.2.1 Tensile Strength, ASTM D-412, Die C

8.3 MPa (1200 psi) minimum

4.4.2.2 Elongation, ASTM D-412, Die C

200% minimum

4.4.2.3 Tear Strength, ASTM D-1004

35.8 kg/cm (200 lbf/in) thickness minimum

4.4.2.4 Specific Gravity, ASTM D-792

1.3 maximum

4.4.2.5 Abrasion Resistance

Taber Abraser Equipment. CS #10 abrasion wheels, 500 gram load, 250 cycles, wear pattern and color shall be equivalent in appearance with approved master samples in TDTC.

4.4.2.6 Volatile Loss

A specimen 2.5 cm x 7.6 cm (1 in x 3 in) suspended in a recirculating hot air oven at 85-91°C (185-195°F) for 70 hours shall exhibit a 4% maximum volatile loss.

4.4.2.7 Spewing

Specimens from Volatile Loss test wiped with clean, dry, white cloth shall exhibit no evidence of spewing.

4.4.2.8 Low Temperature Resistance

A specimen 2.5 cm x 7.6 cm (1 in x 3 in) bent around a 6.4 mm (1/4 in) diameter mandrel and exposed at -20°C (-29°F) for four hours in low temperature cabinet shall exhibit no cracks.

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