

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS G-7085
		Former Designation: TMS-7085
TITLE: Second Surface Decorative Finish - Plastics		CURRENT REV No.: 1606
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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 vacuum metallized or painted bright decorative finishes applied to the second surface (the reverse side or second visible surface) of a clear plastic. This process may be used on interior or exterior applications such as light bezels, horn buttons, product graphics and similar applications.

2.0 SCOPE

This specification covers the processing, finish requirements, performance requirements, and quality.

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
CFR Title 29, Part 1910
NAVISTAR Manufacturing Std. MS-D-13
NAVISTAR Engineering Design Std A-16
NAVISTAR MPAPS B-50

ASTM B 117
NAVISTAR MPAPS G-9008
NAVISTAR MPAPS D-7051
MPAPS GT-31

4.0 PROCESS AND PERFORMANCE

4.1 Vacuum Metallized Process

4.1.1 A clear, resinous base coat applied to the cleaned and dried significant (second) surface by spraying, flowing, or dipping, and then baking.

4.1.2 A bright, thin metallic film deposited in a vacuum from the vaporization of a metal such as aluminum, chromium, copper, gold or silver.

4.1.3 A baked, pigmented, protective top coat.

4.2 Painted/Coated

Shall conform to the requirements of MPAPS G-9008.

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JUNE 2016



Documents

Page 1 of 5
Document Sharing Hub

NUMBER: MPAPS G-7085	TITLE: Second Surface Decorative Finish - Plastics	REVISION: 1606
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4.2.1 Coating Quality

Coating shall be smooth and adherent. No runs, sags, blisters, wrinkles or skips shall be permitted.

4.3 Electroplated

Chrome plated plastic components shall conform to the requirements of MPAPS D-7051.

4.4 Finish Requirements

Coating shall be of uniform color and brightness which is free from shadows or color fringes on the significant visible surface. The appearance shall be match the prototype parts approved by the Navistar Industrial Design Department.

4.5 Component Performance Requirements

Each applied layer to the polymeric lens must pass the following tests:

4.5.1 Adhesion

Apply a strip of adhesive tape (#710 Scotch Tape - 3M Company) 1.9 cm (3/4 in) wide to the coated surface. Pull tape at 90° to the surface.

4.5.1.1 Required

Coating shall not adhere to tape.

4.5.2 Accelerated Weathering

Interior parts, per Method A of MPAPS GT-31, 1200 kj minimum exposure.

Exterior parts, per Method B of MPAPS GT-31, 3600 kj minimum exposure.

4.5.2.1 Required

No deterioration or color change greater than ΔE of 3 of coating.

4.6 Assembly Durability

Finished parts (normally composed of an acrylic insert with second surface decorative finishes, bonded into a metal or plastic bezel) must withstand the following indicated test procedures without exhibiting objectionable deleterious effects such as, but not limited to:

- Material embrittlement.
- Color change of plastic or applied finish.
- Surface yellowing, chalking, crazing, cracking, distortion, gloss change, tackiness, hardness change.
- Loss of adhesion of applied finishes.
- Loss of adhesion of insert from bezel.
- Corroded appearance of electro-deposited, vacuum deposited, or sputtered metals.

4.6.1 Conditioning

Assemblies will be conditioned for 7 days at 70°C in an air-circulating oven. No change of color or appearance will be visible prior to the start of testing.

4.6.2 Cleanability Test

Test the first surface by briskly rubbing for five seconds, using two fingers and moderate pressure, with a soft cotton cloth saturated with VM&P naphtha.

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JUNE 2016



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Page 2 of 5
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