



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

MICHIGAN TESTING INSTITUTE, INC.
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MECHANICAL

Valid To: August 31, 2027

Certificate Number: 0414.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on paints, organic coatings, clear and pigmented organic finishes, primed metallic substrates, organic coatings on metals, coated steel, automotive trim parts, decorative interior plastic parts, non-decorative powder coatings, polyvinyl chloride coated fabrics, polyvinyl chloride sheets, soft interior trim parts, soft vinyl chloride sheets, trim panels, textiles, plastic substrates, flexible cellular plastics, vinyl, and leather:

Test

Abrasion

Standard

ASTM D3884, D4060, D968, D3389;
DSM ESX-60210 (4.9), ESX-60261 (3.10), ESX-60523 (4.18),
ESX-83217 (4.19), ESX-83220 (4.11);
FIAT 50488/02, LP.7M069;
FORD FLTM BN108-02, FLTM BN108-04;
FTM 141C (Method 6192.1);
GM 9515P (*Inactive 6/13*);
GMW 3208, 14125, 15487;
HONDA HES D6501 (3.32);
HYUNDAI MS210-05 (4.8), MS700-60 (4.6, 4.7);
NISSAN NES M0136, NES M0007 (2014-1) (60), NES M0141
(6.2.8 – Method 1 and 2);
TOYOTA PPS 4017, TSM7508G (6.12), TSM0502G (4.6.1,
4.6.2, 4.6.3, 4.6.4), TOYOTA BOSHOKU BSDM0502 (4.6.4),
TSH3130G (4.16);
RIVIAN RTS.1746;
SAE J365, J1530 (3, 4), J1847, J948 (3);
VOLVO STD 1024, 7134;

Air Pressure Resistance

WSS-M99P41-A10/A72 (3.30)

Adhesion and Peel Strength

ASTM B571, B533, D751 (50-53), D413 (Machine Method),
D903, D3359; D1000 (46-53), D6862, D3330;
FIAT CHRYSLER FCA 50461;
FORD ESB-M11P8-A, FLTM BI106-01,
WSS-M99P41-A10/A72 (3.11.3, 3.11.5.3), FLTM BN 151-05;
FUJI TS371-00-009 (4.2.4), TS420-6-21;
GM 3602M (3.4, 3.5) (*Inactive 8/10*),
3608M (4.1, 4.2, 4.3) (*Inactive 8/10*), 3611M (*Inactive 5/11*),
3622M (4.3) (*Inactive 12/10*), 9071P (*Inactive 9/12*),
9160P (*Inactive 6/15*), 9502P (*Inactive 8/12*);

(A2LA Cert. No. 0414.01) Revised 11/03/2025

 Page 1 of 15

Test

Adhesion and Peel Strength
(continued)

Standard

GMW 14892, 14829, 16005, 16443, 14695, 14757, 15851
(4.1.3.6.2);
HINO HTSH1503;
HONDA HES D6501 (3.6);
HYUNDAI M3706-M-01 (4.2), MS700-60 (4.3, 4.4, 4.9, 4.12,
4.13, 4.14, 4.15, 4.16, 4.17, 4.18, 4.23, 4.24, 4.26, 4.27, 4.30);
MS711-10 (4.4, 4.6, 4.7, 4.8, 4.9, 4.10, 4.16);
ISO 8510-2, 2409;
NISSAN M0007 (2014-1) (25, 29, 44), M0141 (6.2.5);
RIVIAN RTS.1779, RTS.1805, RTS.1806;
TOYOTA BOSHOKU BSDM0502 (4.14), PPS 3029, PPS 2022,
TSM7508G (4.3), TSH1503G, TSM0502G (4.14);
SAE AMS2515 (3.6.2)
MERCEDES BENZ MBN 55555-6 (5.26);
VOLVO STD 423-0009, STD 423-0012;,VCS 1029, 54739,
STD 1029, 3821

Alkaline Acid Resistance

DSM ESX-71227 (4.7);
HES D6501 (3.24, 3.25);
HYUNDAI MS700-60 (4.22);
MAZDA MES MN601 (16);
WSS-M4P13-A/D1 Section 3.5.3

Appearance

FORD FLTM BI109-01;
SUBARU TS371-00-004 (7.1), TS430-07-026 (1),
TS371-00-009 (4.2.1);
GM 4383M (3.2.2.1) (*Inactive 12/10*);
HINO HTSH3131 (4.1,4.2);
HONDA HES D6501 (3.1);
HYUNDAI MS711-10 (3.1.2);
TOYOTA TSM7508G (4.1)

Ash

ASTM D1278 (Part 14), D2584, D5630 (Method B),
ISO 1172, 3451-1 (Method A);
NISSAN NES M0007 (2014-1) (s10.)

Ball Burst Test

ASTM D6797

Blistering Evaluation

ASTM D714;
VOLVO STD 420-0001

Breaking Strength

ASTM D751 (Procedure A-Grab Test Method),
(Procedure B-Cut Strip Method), ASTM D1000 (37-45, 110-115)

Car Wash Simulation/Grained
Surface Cleanability

SUBARU TS371-00-004 (7.28), TS371-00-004 (7.28), TS371-
00-009 (4.2.10, 4.2.18);
GM 9600P, 9688P;
GMW 14865, GMW 17103;
HONDA 4271Z-SNA-A001;
NISSAN NES M0007 (2014-1) (31);
TOYOTA BOSHOKU BSDM0502 (4.11), PPS 3005,
TSM7508G (6.11), TSM0502G (4.11)

Test

CASS Test

Standard

ASTM B368;
 FORD FLTM BQ 105-01;
 GMW14458;
 ISO 9227 (5.2.4)

Checking Evaluation

ASTM D660

Chip Resistance (Gravel)

ASTM D3170;
 FORD FLTM BI157-06;
 SUBARU TS371-00-004 (7.10), TS430-07-026 (11),
 TS371-00-009 (4.2.16);
 GM 9508P (*Inactive 8/10*);
 GMW 14700;
 HONDA HES D6501 (3.33);
 MAZDA MES MN601 (30);
 NISSAN NES M0007 (2014-1) (28), NES M0141 (6.2.3);
 RIVIAN RTS.1806 (METHOD B), RTS.1871 (METHOD B)
 SAE J400;
 TOYOTA TSH1553G, TSH1558G, TSM0502G (4.5.4);
 VOLVO STD 1024,7132

Cleaning/Solvent Resistance

ASTM D1308, D896;
 CHRYSLER 463KC-4-01, 463PB-31-01, 463PB-57-03;
 DSM ESX-60210 (4.8), ESX-60211 (4.7), ESX-60261 (3.9),
 ESX-71227 (4.9), ESX-83244 (3.9);
 Ford WSS-M99P41-A10/A27 (3.32), FLTM BI 168-01;
 WSS-M4P13-A/D1 (3.5.3, 3.5.4) ;
 FUJI TS371-00-009 (4.2.8,4.2.9,4.2.13,4.2.14,4.2.15,4.2.20);
 GM 4383M (3.2.3.3.2) (*Inactive 12/10*), 7400M (3.2.3.1.5)
 (*Inactive 12/13*), 7453M (6.2) (*Inactive 3/11*), 9126P (*Inactive 4/12*), 9509P (*Inactive 10/12*), 9533P (2, 3) (*Inactive 11/09*),
 9900P (*Inactive 3/10*);
 GMW 3402, 14334, 14867 (3.3, 3.6), 14701 (2, 3), 15891,
 15725 (4.7); 14664 (3.7), 3359 (3.9); 14906 (4.9.2.5); 14665
 (3.4.7.2, 3.4.6);
 HINO HTSH1508;
 HONDA HES D6501 (3.14, 3.21, 3.22, 3.23, 3.28, 3.36, 3.38);
 HYUNDAI M3706-M-01 (4.8), MS210-05 (4.7),
 MS711-10 (4.14);
 MAZDA MES PW 67601B (7.4.2)
 NISSAN NES M0133 (Methods 1-4), NES M0007 (2014-1) (36,
 37, 38, 39, 40, 41, 42, 43, 45, 59, 72, 73, 74, 75), NES M0141
 (6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.7, 6.3.11, 6.3.12, 6.3.13, 6.3.14,
 6.3.16, 6.3.18, 6.3.23, 6.3.24, 6.3.25, 6.3.28);
 TOYOTA BOSHOKU BSDM0502 (4.8.1, 4.8.2), PPS 1006,
 PPS 1002, PPS 1007, TSM7508G (6.8,6.15,6.16,6.17,6.19),
 TSH1509G; TSH1508G; TSM0502G (4.8.1, 4.8.2, 4.8.3),
 TSM0502G (4.8);
 RIVIAN RTS.1661, RTS.1750;
 TESLA TP-0000703 (Method A);
 VOLVO STD 1026,8177, TL 52622 (2.1.4, 2.1.5)

<u>Test</u>	<u>Standard</u>
Coating Thickness	ASTM B499, D6132, D7091; ISO 2808 (Methods 6 and 7); FLTM BI117-01; HES D6501 (3.2)
Color	ASTM E1331; FORD FLTM BI109-01; SUBARU TS430-07-026 (1-2); GM 7400M (3.2.3.1.4), GM 9131P; HONDA HES D6501 (3.4, 3.31); NISSAN NES M0007 (2014-1) (24); SAE J1545, J1767; TOYOTA TSH1518G; VOLVO STD 423-0041
Color Crocking/Mar Resistance	AATCC Method 8; AATCC 107-2013; CHRYSLER 463PB-54-01; FORD FLTM BN107-01, FLTM BN108-10, FLTM BI 161-01 GM 9033P (<i>Inactive 7/13</i>); ISO 105-X12, ISO 15701; RIVIAN RTS.1749, RTS.1750; SAE J861; TOYOTA BOSHOKU BSDM0502 (4.13); VOLVO VCS 1026,84329
Compression and Recovery of Insulation Padding	SAE J1352
Compressive Properties of Sandwich Cores	ASTM C365
Compression-Deflection, Compression/Tension Set and Apparent Density of Expanded Cellular Materials	FIAT 50423; ASTM D3575 (9-16)
Conical Bend Test	ASTM D522 (Method A)
Condensing Water Vapor	FORD FLTM BI 104-02
Corrosion and Corrosion Creepback	ASTM D1654; FORD FLTM CA 005-01, GM 9102P (<i>Inactive 12/10</i>), 9511P (<i>Inactive 12/10</i>), GMW 3286, 15282, 15288; ISO 9227 (5.2); NISSAN NES M0158, NES M0007 (2014-1) (33); SAE J1389; Stellantis CS.00251; TOYOTA TSH1555G (A), PPS 1001; VOLVO STD 423-0014, STD 1021,2
Cyclic Corrosion	ASTM D6899: CS-CORROSION (<i>Sectrion 4 only</i>) (Component Level); FORD FLTM BI 123-03, FLTM BI 123-01, CETP:00.00-L-467; GM 9540P (<i>Inactive 3/10</i>);

<u>Test</u>	<u>Standard</u>
Cyclic Corrosion (<i>continued</i>)	GMW14872; HINO HTSH1555; ISO 11997-1; NISSAN NES M0158; NES M0007 (2014-1) (34); RIVIAN RTS.1681; SAE J2334; SAE J2721; TESLA TP-0000808, TP-0000588; TOYOTA TSH1555G (A); VOLKSWAGEN PV1210 VDA 233-102
Dead Load Seam Strength	ASTM D751 (80-83)
Detergent Resistance	ASTM D2248; HONDA HES D6501 (3.27)
Determination of Water Spotting	GMW 14102
Determining Fiber Degradation of Automotive Textiles	GM 9771P; GMW 3387
Determining the Cohesive Strengths of Felts and Similar Materials	GMW 14695
Dime Scrape Test	GM 9506P (<i>Inactive 6/13</i>)
Dimension and Mass	ASTM D751 (7-11)
Dimensional Stability	DSM ESX-62310 (4.4), ESX-83220 (4.17); FCA PF.90155 (5.6); FORD FLTM BN105-03; SUBARU TS371-00-004 (7.22); GM 7400M (3.2.3.1.7), 7451M (3.6), 7452M (3.5), 9452P; GMW 4217; SAE J315 (15); TRW TS33058642
Durometer Hardness (Shore A and D)	ASTM D2240; ISO 7619-1, ISO 868, ISO 48-4
Dust – Out	GM9635P (<i>Inactive 6/13</i>); GMW 16998
Dye Transfer	Chrysler 463KC-01-01; 50496
Elongation	ASTM D751 (17)

Test

Environmental Cycle

Temperature:
(-40 to 250) °C
Humidity:
(30 to 95) %RH

Standard

ASTM D2126, ASTM D1000 (129-139);
BMW TP 303.4;
CHRYSLER 463LB-12-01 (A and B), 463PB-22-01;
DSM ESX-60210 (4.3.1, 4.3.2), ESX-60211 (4.3),
ESX-60256 (3.1), ESX-60261 (3.2), ESX-62310 (4.8),
ESX-83215 (3.4), ESX-83244 (3.3, 3.4, 3.5);
FCA 50184, PF.90155 (5.2);
SUBARU TS371-00-009 (4.2.13), TS371-00-004 (7.23,7.24,
7.25);
FORD FLTM BQ 104-07 (*Except 7-9, 16-18*),
FLTM BO 040-01, WSS-M99P32-C (3.8.1), WSS-M99P41-
A10/A72 (3.12.5, 3.22);
GM 3628M (3.3.6) (*Inactive 3/11*)¹, 4383M
(3.2.3.1) (*Inactive 12/10*), 9200P (4.1), 9505P (*Inactive 12/10*);
GMW 14124 (*Except Cycle T*), 14650 (4.3), 15725 (4.3);
HONDA HES D6501 (3.29);
HYUNDAI M3706-M-01 (4.4), MS210-05 (4.3, 4.4),
MS711-10 (4.11);
MAZDA MES MN601 (12), MES PWPT001A (7.6);
MERCEDES DBL 9202 (4.1.2);
NISSAN NES M0132, NES M0007 (2014-1) (46), NES M0141
(6.3.9);
RIVIAN RTS.1741, RTS.1946 (METHOD B);
SAE J2100;
TESLA TP-0000706;
TOYOTA TSF7754G (5.2), BSDM0502 (4.1.3, 4.1.4, 4.9),
PPS 2003, PPS 3016, PPS 2001, PPS 2011,
TSM7508G (6.3,6.6,6.14), TSM0502G (4.1.3, 4.1.4);
Volkswagen PV1200;
VOLVO DPR31834973 (8.3)
MERCEDES BENZ MBN 55555-4 (*Except 5.4*)

Evaluation of Degradation of Paint
Coatings (degree of rusting)

VOLVO STD 420-0002

Fabric:

Mass Per Unit Area
Width of Textile Fabrics

ASTM D3776 (*Except A*);
ASTM D3774, ASTM D1000 (11-20)

Fiber Loss Test for Insulation

FLTM BN 058-01

Filiform Corrosion Resistance

ASTM D2803; NISSAN NES M0007 (2014-1) (35); SAE J2635;
HONDA HES D6501 (3.16);
TOYOTA PPS 1016

Film Hardness

ASTM D3363;
ISO 15184;
FIAT CHRYSLER FCA 50452/02;
SUBARU TS371-00-004 (7.4), TS430-07-026 (2),
TS371-00-009 (4.2.3), TS430-07-089 (6.2);
MAZDA MES MN601 (9);
NISSAN NES M0007 (2014-1) (s26., 62.), NES M0141 (6.2.1);
TOYOTA TSH 1539G (2.1)

<u>Test</u>	<u>Standard</u>
Film Thickness	ASTM D7091; FORD FLTM BP 124-01; SUBARU TS371-00-004 (7.2, 7.3), TS371-00-009 (4.2.2), TS430-07-089 (6.1); ISO 2808 (Methods 6 & 7); HES D6501 (3.5) TOYOTA TSH1539G
Flaking Evaluation	ASTM D772
Flammability	ASTM D350 (B), D5132 BMW GS 97038; CMVSS 302; CHRYSLER MSJP 9-4 (Steam and Burn); FIAT CHRYSLER CP-508A; CP-5237LA, CP-5237HA; DBL 5307.10; DIN 75200; DSM ESX-60410, ESX-62101 (4.10), ESX-83220 (4.24); DOT TP-302-03; FMVSS 302; FORD ES-E97B-1011014-AA; EU BN 024-02, GB 8410; GM 9070P (<i>Inactive 9/11</i>); GMW 3232; HONDA HES C206, HES D6003; ISO 3795; KMVSS Art. 95; MAZDA MES PWPT001A (7.10); MS 300-8; NISSAN NES0094; PV 3904; RIVIAN RTS.1733 SAE J369; TL 1010; UNITED NATIONS R118r2e Annex 6; TOYOTA TSF7754G (5.12); TSM 0500G; VOLVO VCS5031.19; VSTD 19-1; VOLVO STD 104-0001
Flexural Properties	ASTM C393, D790, D1184, D6272; ISO 178, 6272-2; VOLKSWAGEN PV3954
Fluorescent UV Exposure (QUV)	ASTM D4329, G53:1995, G154, D5894; SAE J2020
Foam Laminate Curl Test	GM 9330P (<i>Inactive 9/12</i>); GMW 4089

Test

Fogging

Standard

FORD FLTM BO116-03,
GM 9305P;
GMW 3235;
HYUNDAI MS210-05 (4.11);
RIVIAN RTS.1755;
SAE J1756;
TOYOTA TSM0503G Method B, BSDM0503 Method B

Fuel Resistance

DSM ESX-62310 (4.12), ESX-71227 (4.8);
FORD FLTM BO 101-05;
GM 9500P (*Inactive 8/10*), 9501P (*Inactive 8/10*),
9659P (*Inactive 12/10*);
GMW 14650 (4.7), 14333, 17137;
MAZDA MES MN601 (18, 20)

Gloss

ASTM D523;
FIAT CHRYSLER FCA 50457;
FORD FLTM BI 110-01;
SUBARU TS430-07-026 (1-3);
HONDA HES D6501 (3.3);
HYUNDAI MS700-60 (4.5);
ISO 2813
TOYOTA TSH1519G
VOLVO 423-0023

Grain Retention of Interior Trim
Materials

GM 9142P

Haze

ASTM D4039, D1003 (Procedure B)

Humidity

ASTM D1735, D2247;
DIN 50017 (*Constant Atmosphere only*);
DSM ESX-71227 (4.4), ESX-83215 (3.3);
FORD WSS-M99P41-A10/A72 (3.12.4),
WSS-M15P34-F (3.6.16);
FUJI TS371-00-009 (4.2.6), TS430-07-089 (6.4);
GM 2617M (3.4.2.9) (*Inactive 3/08*), 4465P (*Inactive 1/11*),
2210M (3.3.1.1, 3.3.1.2);
GMW 14729, 14650 (4.4);
HONDA HES D6501 (3.19);
HYUNDAI M3706-M-01 (4.7);
ISO 6270-02;
MERCEDES DBL 9202 (4.1.3);
NISSAN NES M0007 (2014-1) (32);
RENAULT RNES-B-0019 Method A;
RIVIAN RTS.1743;
TOYOTA TSF7754G (5.7) BOSHOKU BSDM0502 (4.2, 4.2.1,
4.2.2), PPS 2008; TSM7508G (6.4), TSH3130G (4.7),
TSM0502G (4.2.1, 4.2.2);
VOLVO DPR31834973 (8.6), STD 423-0018; VCS 1027,33759;
STD 1027,3375

Test
Impact

Standard
ASTM D5420, D2794;
CHRYSLER 463LB-11-01-C;
DSM ESX-60210 (4.11), ESX-62310 (4.7), ESX-83244 (3.10);
FCA LP.7N022 (Option 1);
FORD FLTM BO151-01;
SUBARU TS371-00-004 (7.9);
GM 9032P (*Inactive 6/10*), 9140P (*Inactive 3/12*),
9302P (*Inactive 3/14*)¹;
GMW 14093 (Apparatus A & C);
HYUNDAI MS210-05 (4.10); MS711-10 (4.15);
ISO 6272-2;
MAZDA MES MN601 (33);
NISSAN NES M0134, NISSAN NES M0007 (2014-1) (27, 77);
RIVIAN RTS.1776, RTS.1806 (METHOD A), RTS.1871
(Method B & C);
STELLANTIS 463KB-28-01 (Method B);
TOYOTA TSF7754G (5.3), BOSHOKU BSDM0502 (4.5,
4.5.1,4.5.2, 4.5.3), TSH1504G; TSM0502G (4.5.1, 4.5.2, 4.5.3),
PPS 3003

Indentation and Recovery

FORD FLTM BO 111-02

Irradiation Heat Resistance

DSM ESX-83215 (3.1);
GM 9310P; GMW 15432;
TOYOTA TSF7754G (5.1), PPS 2004

Laminate Bond Strength

GMW 3220

Laminate Softening Point

DSM ESX-83220 (4.23.2);

Load Test for Storage Compartment
Door

TOYOTA PPS 3008

Mandrel Bend

ASTM D522 (Method A and Method B);
FORD FLTM BN 102-01;
SUBARU TS371-00-004 (34, 7.27);
FUJI TS371-00-009 (4.2.11);
GM 3628M (3.6) (*Inactive 3/11*),
7400M (3.2.3.1.3) (*Inactive 3/11*), 9503P (*Inactive 6/12*);
GMW 16746, 14108;
HONDA HES D6501 (3.10, 3.11)
MAZDA MES MN601 (31);
NISSAN NES M0007 (2014-1) (30)
SAE J323

Mass Per Area

GMW3182;
ISO 9073-1

Melt Flow Rate

ASTM D1238;
ISO 1133

Mildew Growth

FORD WSS-M5H34-A (3.12), WSS-M99P32-C (3.7);
GM 9128P (*Inactive 4/11*);
GMW 3259

<u>Test</u>	<u>Standard</u>
Moisture Absorption	FORD WSS-M99P32-C (3.11); GMW 16856, GMW14777 (4.3.1)
Odor	CHRYSLER 463KC-09-01; DSM ESX-62101 (4.9), ESX-83217 (4.5), ESX-83220 (4.22); FORD FLTM BO 131-01, -03; GM 9130P (<i>Inactive 6/15</i>), 9832P (<i>Inactive 2/12</i>); GMW 3205; MS 300-34; RIVIAN RTS.1754; SAE J1351; TOYOTA TSM 0505G (<i>Except 8.3</i>); BOSHOKU BSDM 0505 Volkswagen VDA 270; Volkswagen AG PV3900; VOLVO VCS 1027,2729
Oil Immersion Test	ASTM D1000 (116-122); GM 4350M (Appendix B) (<i>Inactive 12/13</i>); GMW14664 (3.5)
Orange Peel Measurement	GMW 15777 Section 3.2.2
Oven Aging Temperature: (38 to 250) °C	ASTM D751 (72-79), D1000 (77-82): Chrysler 463LB-13-01; DSM ESX-60210 (4.4), ESX-60261 (3.15), ESX-60359 (4.9), ESX-60523 (4.16), ESX-62101 (4.8), ESX-62310 (4.9); FCA PF.90155 (5.5); FORD FLTM BN113-02, WSB-15P40-A (3.11), WSK-M98P5-A (3.6), WSS-M99P32-C (3.8.2); WSS-M99P41- A10/A72 (3.12.2, 3.12.3); SUBARU TS371-00-004 (4/17)(30-3), FUJI TS430-07-026 (10) GM 2210M (3.3.1.1), 3628M (3.15) (<i>Inactive 03/11</i>), 7452M (3.4) (<i>Inactive 12/13</i>), 7453M (5.2) (<i>Inactive 03/11/11</i>), 9504P (<i>Inactive 05/01/11</i>); GMW 14867 (3.9), 14650 (4.2), 15725 (4.5), GMW 17538 (3.4.1.1); HES D6501 3.20 (<i>excluding 3.8 and 3.17</i>); HONDA 0096Z-TAA-0000 HYUNDAI M3706-M-01 (4.5) MAZDA MES MN601 (11), MES PWPT001A (7.3, 7.4); MERCEDES DBL 9202 (4.1.1); NISSAN M0007 (2014-1) (15), NES M0141 (6.3.8, 6.3.22 – Method A); RIVIAN RTS.1946 (METHOD A); TOYOTA TSF7754G (5.6); BOSHOKU BSDM0502 (4.1.1, 4.1.2, 4.1.5); PPS 2006, PPS 2005; TSM7508G (6.1,6.2,6.13), TSM0502G (4.1.1, 4.1.2, 4.1.5); VOLVO DPR31834973 (8.4, 8.5); Volkswagen VW 44045 (5.14)
Overstroke Opening Test for Storage Compartments	TOYOTA PPS 3007

<u>Test</u>	<u>Standard</u>
Parting Line	GM9684P (<i>Inactive 10/12</i>); GMW 15424
Performance Specification for Cable-to-Terminal Electrical Crimps	SAE/USCAR-21, Except 4.5.5
Perspiration Resistance	AATCC TM15-2013; Chrysler 463KC-21-01; FORD FLTM BI 113-07, FLTM BI113-06; GM 9240P; GMW 14296; HONDA HES D6501 (3.26); SAE J1326
Print Resistance	MAZDA MES MN601 (10); TOYOTA TSH1501G (except Method B)
Puckering Resistance	TOYOTA TSF7754G (5.11)
RCA Wear Test	ASTM F2357 (<i>withdrawn 2017</i>)
Resistance to Cold Crack of Folded Materials	GMW 14126
Resistance to Loop Pull-out of Floor Carpet	GMW 14148
Resistance to Water and Soap Spotting	FORD FLTM BI113-01; Chrysler 463KC-03-01
Resistance to Water Wicking	ASTM D751, 99-102; SAE J913
Retention Force Measurement	GMW15525
Sag Test	GM 3628M (3.8) (<i>Inactive 3/11</i>)
Salt Spray	ASTM B117; DIN 50021 (<i>Salt Spray only</i>); DSM ESX-71227 (4.5); FORD FLTM BI 103-01; FUJI TS371-00-009 (4.2.7), TS430-07-089 (6.5); GM 4298P (<i>Inactive 12/10</i>); GMW 3286, GMW3172 (9.4.8); ISO 9227; HINO HTSH1552; HONDA HES D6501 (3.15); HYUNDAI M3706-M-01 (4.11); JIS Z2371; NISSAN NES M0140; SAE AMS2515 (3.6.4); TSH1552G, TSC0511G, Section 6.12, TSM7508G (6.7)

<u>Test</u>	<u>Standard</u>
Scratch Resistance of Organic Coatings – Simulation of Car Wash Installations	SUBARU TS371-00-004 (7.5), TS371-00-009 (4.2.10), TS371-07-026 (13); GMW 14865
Scratch Resistance of Organic Coatings and Self Adhesive Foils	GMW 14698
Scratch Resistance, Erichsen Pen	HYUNDAI MS210-05 (4.9); VOLVO VCS 1024,31139
Scuff and Mar	CHRYSLER 463DD-18-01, 463DD-18-02; DSM ESX-60210 (4.9); FORD FLTM BN108-13, BO 162-01; GM 4367M (3.3.7), 9150P; GMN 3943; GMW 14130, 14688, ISO 1518-1; NISSAN NES M0007 (2014-1) (55, 56); RIVIAN RTS.0059 DRAWING NO. 7710Z-SCC-9000 (6.9)
Scuffing	FORD FLTM BN108-04
Shift Strength	DSM ESX-83220 (4.10)
Shrinkage	DSM ESX-60523 (4.7), ESX-83217 (4.15.1), ESX-83220 (4.13); GM 3628M (3.10) (<i>Inactive 3/10</i>); SAE J883
Soil Resistance	CHRYSLER 463KC-4-01; DSM ESX-60261 (3.17), ESX-60411 (3.3), ESX-83217 (4.25); FORD FLTM BN112-08
Specific Gravity	ASTM D792 (Method A), D3572 (48); ISO 1183-1; NISSAN NES M0007 (2014-1) (s7.)
Stain	ASTM D925 (Method A); DSM ESX-60523 (4.11), ESX-83217 (4.13); FORD FLTM BN103-01; GM 9141P; GMW 14864, GM 14132; HYUNDAI MS711-10 (4.17); SAE J912
Standard Atmosphere	ASTM D618; DIN 50014 (Class 2)
Standard Conditioning of Organic Material	GMW 3221
Static Load	Toyota PPS 3013
Static Shear Test	GM 3608M (3.3) (<i>Inactive 3/10</i>)
Steam Resistance	FCA 463KC-15-01

<u>Test</u>	<u>Standard</u>
Stickiness Test	TOYOTA BOSHOKU BSDM502 (4.12)
Stiffness Testing	ASTM D1388 (Option A), D5732; DIN 53362; FORD FLTM BN 157-02; GMW 3390; ISO 9073-7; SAE J949
Stress Cracking Test for Plastics	FLTM BO 127-03; TSM0502G (4.9)
Stretch and Set	GMW 3211; SAE J855
Sunscreen Lotion/Insect Repellent	FORD FLTM BI 113-08; GMW 14445; VOLVO Method ID 88200001
Tackiness	FORD FLTM BO 061-01; HONDA HES D6501 (3.12)
Tear Resistance	ASTM D624, D1004, D3574 (Test F); DSM ESX-60523 (4.6), ESX-83217 (4.9), ESX-83220 (4.7); ISO 13937-2, 9073-4; LP-13160; RIVIAN RTS.1773
Tear Strength	ASTM D751 (16) (Procedure B - Tongue Tear Method), D2261
Tensile Properties	ASTM D638, D952, D1708, D3039, D5034, D5733, D1876, D5587, D412, D359, D3153; CHRYSLER 463LB-10-01; FCA LP.7M008; DSM ESX-60256 (3.3), ESX-60359 (4.2), ESX-60523 (4.4, 4.5), ESX-83217 (4.6, 4.8, 4.10), ESX-83220 (4.4.1, 4.5, 4.23.1); FORD ESB-M11P8-A, ESF-3LE8A080-AA (IIIE), FLTM BN113-01, FLTM BO113-0,3 FLTM BA 116-01, WSS- M99P41-A10/A72 (3.33); GMW 14695, 3326, 3010; ISO 527-1, -2, 34-1, 9073-18, 13934-2, 9073-3, 9073-4, 3386-1; HYUNDAI MS700-60 (4.2); MS711-10 (4.2, 4.3, 4.5); NISSAN NES M0007 (2014-1) (67); TOYOTA TSF7754G (5.8), PPS 5001, PPS 3063, PPS 3026, PPS 3038, PPS 6013, PPS 5003, TSM0502G (4.10.1)
Thermal-Oxidative Stability Characteristics of Plastics	ASTM D3012; GM 9059P (<i>Inactive 06/11</i>); GMW 15725, 4.4; ISO 4577

<u>Test</u>	<u>Standard</u>
Thermal Shock for Coating Adhesion	FLTM BI 107-05; CHRYSLER 463PB-64-01; LP.7M061 FCA PF.90155 (5.1); GMW 15919; GM 9525P (<i>Inactive 04/14</i>) RIVIAN RTS.1674; VOLVO 423-0015
Thickness	ASTM B487, ASTM D1000 (21-27), D1777, D1813, D3652; FLTM CA 005-001, BP 124-01; ISO 2808 (Method 6A), 9073-2, 5084; HYUNDAI MS700-60 (4.1); RIVIAN RTS.1778; SAE AMS2515 (3.6.1), J882
Thickness of Plastic Sheet – Weight Method	FORD FLTM EU BN050-07
Thumbnail Hardness Test	GM 9507P
Topcoat Materials Exterior (Yellowing)	ASTM E313; GM 4367M (3.3.15) (<i>Inactive 08/01/2010</i>);
Trapezoidal Tear	ASTM D751 (32-35)
Vibration Testing (-40 to 150) °C (5 to 2000) Hz 6600 lbf	FIAT 9.90111/02; Ford ES-9L3T-14540-AA, ES-BR3E-6A949-AA, ES-FR3E-6A949-AA, ES-FC44-8146-AA, ES-CM5E-6A949-AA; HYUNDAI MS210-05 (4.6); SAE J1455; TOYOTA BOSHUKU BSDM0502 (4.4, 4.4.1, 4.4.2, 4.4.3); USCAR 20; Volkswagen VW80101, VW80000 PPS 3035, TSM0502G (4.4)
Visual Color Difference Evaluation with a Gray Scale	AATCC Procedure 1; ASTM D2616; ISO 105-A02; FORD WSS-M99P41-A10/A72 (3.12.1.1);
Visual Evaluations	ASTM D610; GMW 15356, 15357, 15358, 15359; ISO 105-A03
Water Immersion	ASTM D870; DSM ESX-60211 (4.6), ESX-71227 (4.3), ESX-83220 (4.12), ESX-83244 (3.8); FCA 50470, LP.7M024; FORD FLTM BI104-01, WSS-M99P41-A10/A72 (3.26); HONDA HES D6501 (3.18, 3.35); HYUNDAI M3706-M-01 (4.6), MS711-10 (4.12); GM 3628M (3.12) (<i>Inactive 03/11</i>), 9514P (<i>Inactive 03/11</i>); MAZDA MES MN601 (13);

<u>Test</u>	<u>Standard</u>
Water Immersion (<i>continued</i>)	NISSAN NES M0007 (2014-1) (57), NES M0141 (6.3.10); RIVIAN RTS.1674; RENAULT RNES-B-00046; TOYOTA BOSHOKU BSDM0502 (4.3); TSM7508G (6.5,6.18), TSM0502G (4.3)
Water Impact Penetration	AATCC TM42; ISO 9073-17
Water Jet Tests for Painted Parts	FORD FLTM BO160-04; GM 9531P (Method B); GMW 14797 (Table A1A), 16745; ISO 16925
Water Vapor Resistance	SAE AMS2515 (3.6.5)
Weight	DSM ESX-60523 (4.3), ESX-62310 (4.3), ESX-83217 (4.1), ESX-83220 (4.2.1); FORD FLTM BN 106-01; GM 9337P; GMW 3182; ISO 9073-1; SAE J860
Wet Out	TOYOTA PPS 6013
Xenon Exposure	ASTM G155, ASTM D7869; FORD FLTM BN117-03; FLTM BO 116-01; GM 9125P (3.3) (<i>Inactive 5/13</i>); GMW 14162 Method D; HYUNDAI MS210-05 (4.5); MS700-60 (4.20); ISO 105-B06; NES M0135 (II), NES M0007 (2014-1) (48), NES M0141 (6.4.1); RIVIAN RTS.1744, RTS.1910 SAE J1885 (<i>Withdrawn 1/08</i>), J1960 (<i>Withdrawn 1/08</i>), J2412, J2527; TESLA TP-0000701 TOYOTA TSM7508G (6.9,6.10,6.20,6.21), TSL0601G; TSM0501G

The laboratory is only accredited for the test methods listed above. The accredited test methods are used in determining compliance with the material specifications listed below. The inclusion of these material specifications on this Scope does not confer laboratory accreditation to the material specifications nor does it confer accreditation for the method embedded within the specifications.

GM 2210M, GM 2617M, GMW14838, GMW14867, GMW14444, GMW14650, GMW 15725, PF-7051, MS-PZ-4-1, MS-PZ-5-1, MS-PD-48-1, WSS-M15P34-D



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Presented this 22nd day of July 2025.

A blue ink signature of Mr. Trace McInturff.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0414.01
Valid to August 31, 2027

For the tests to which this accreditation applies, please refer to the laboratory's «field» Scope of Accreditation.