



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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MECHANICAL

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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:

| <b>Test</b>                | <b>Standard</b>   |
|----------------------------|---|
| Abrasion                   | ASTM D3884, D4060, D968, D2486, D3389;<br>DSM ESX-60210 (4.9), ESX-60261 (3.10), ESX-60523 (4.18),<br>ESX-83217 (4.19), ESX-83220 (4.11);<br>FIAT 50488/02;<br>FORD FLTM BN108-02, FLTM BN108-04;<br>FTM 141C (Method 6192.1);<br>GM 9515P *(Inactive 6/13);<br>GMW 3208, 14125, 15487;<br>HONDA HES D6501 (3.32);<br>NISSAN NES M0136, NES M0007 (2014-1) (60);<br>RIVIAN RTS.1746;<br>SAE J365, J1530 (3, 4), J1847, J948 (3);<br>TOYOTOA BOSHOKU BSDM0502 (4.6.4)  |
| Air Pressure Resistance    | WSS-M99P41-A10/A72 (3.31)   |
| Adhesion and Peel Strength | ASTM B571, B533, D751 (50-53), D413 (Machine Method),<br>D903, D3359; D1000 (46-53);<br>FIAT CHRYSLER FCA 50461;<br>FORD ESB-M11P8-A, FLTM BI106-01; WSS-M99P41-<br>A10/A72 (3.11.5.3);<br>GM 3602M (3.4, 3.5) *(Inactive 8/10),<br>3608M (4.1, 4.2, 4.3) *(Inactive 8/10), 3611M *(Inactive 5/11),<br>3622M (4.3) *(Inactive 12/10), 9071P *(Inactive 9/12),<br>9160P *(Inactive 6/15), 9502P *(Inactive 8/12);<br>GMW 14892, 14829, 16005, 16443, 14695;<br>HONDA HES D6501 (3.6);<br>HYUNDAI M3706-M-01 (4.2);<br>ISO 8510-2, 2409;<br>NISSAN M0007 (2014-1) (25, 29, 44);<br>RIVIAN RTS.1779, RTS.1805, RTS.1806; |



| <b>Test</b>   | <b>Standard</b>   |
|---|---|
| Adhesion and Peel Strength<br>(continued)           | TOYOTA BOSHOKU BSDM0502 (4.14);<br>SAE AMS2515 (3.6.2)<br>MERCEDES BENZ MBN 55555-6 (5.26)  |
| Alkaline Acid Resistance                            | DSM ESX-71227 (4.7);<br>HES D6501 (3.24, 3.25);<br>MAZDA MES MN601 (16)   |
| Appearance  | FORD FLTM BI109-01;<br>FUJI TS371-00-004 (1),<br>FUJI TS430-07-026 (1);<br>GM 4383M (3.2.2.1) *(Inactive 12/10);<br>HES D6501 (3.1)   |
| Ash   | ASTM D1278 (Part 14), D2584, D5630 (Method B);<br>ISO 1172, 3451-1 (Method A);<br>NISSAN NES M0007 (2014-1) (s10.)  |
| Blistering Evaluation                               | ASTM D714   |
| Breaking Strength                                   | ASTM D751 (Procedure A-Grab Test Method),<br>(Procedure B-Cut Strip Method), ASTM D1000 (37-45, 110-115)  |
| Car Wash Simulation/Grained<br>Surface Cleanability | FUJI TS371-00-004 (36);<br>GM 9600P, 9688P;<br>GMW 14865, GMW 17103;<br>HONDA 4271Z-SNA-A001;<br>NISSAN NES M0007 (2014-1) (31);<br>TOYOTA BOSHOKU BSDM0502 (4.11)  |
| CASS Test   | ASTM B368; GMW14458; ISO 9227 (5.2.4)   |
| Checking Evaluation                                 | ASTM D660   |
| Chip Resistance (Gravel)                            | ASTM D3170;<br>FORD FLTM BI157-06;<br>FUJI TS371-00-004 (10), FUJI TS430-07-026 (11);<br>GM 9508P *(Inactive 8/10);<br>GMW 14700;<br>HONDA HES D6501 (3.33);<br>MAZDA MES MN601 (29);<br>NISSAN NES M0007 (2014-1) (28);<br>RIVIAN RTS.1806 (METHOD B), RTS.1871 (METHOD B)<br>SAE J400;<br>TOYOTA TSH1553G, TSH1558G |

| <b>Test</b>                   | <b>Standard</b>   |
|-------------------------------|---|
| Cleaning/Solvent Resistance   | ASTM D1308, D896;<br>CHRYSLER 463KC-4-01, 463PB-31-01, 463PB-57-03;<br>DSM ESX-60210 (4.8), ESX-60211 (4.7), ESX-60261 (3.9),<br>ESX-71227 (4.9), ESX-83244 (3.9); Ford WSS-M99P41-<br>A10/A27 (3.32);<br>GM 4383M (3.2.3.3.2) *(Inactive 12/10),<br>7400M (3.2.3.1.5) *(Inactive 12/13), 7453M (6.2) *(Inactive<br>3/11), 9126P *(Inactive 4/12), 9509P *(Inactive 10/12),<br>9533P (2, 3) *(Inactive 11/09), 9900P *(Inactive 3/10);<br>GMW 3402, 14334, 14867 (3.3, 3.6), 14701 (2, 3), 15891,<br>15725 (4.7); 14664 (3.7);<br>HONDA HES D6501 (3.14, 3.21, 3.22, 3.23, 3.28, 3.36, 3.38);<br>HYUNDAI M3706-M-01 (4.8);<br>NISSAN NES M0133 (Methods 1-4), NES M0007 (2014-1) (36,<br>37, 38, 39, 40, 41, 42, 43, 45, 59, 64, 72, 73, 74, 75);<br>TOYOTA BOSHOKU BSDM0502 (4.8.1, 4.8.2);<br>RIVIAN RTS.1661, RTS.1750;<br>TESLA TP-0000703 (Method A) |
| Coating Thickness             | ASTM B499, D6132, D7091;<br>ISO 2808 (Methods 6 and 7);<br>FLTM BI117-01;<br>HES D6501 (3.2)  |
| Color                         | ASTM E1331;<br>FORD FLTM BI109-01;<br>FUJI TS430-07-026 (1-1);<br>GM 7400M (3.2.3.1.4), GM 9131P;<br>HONDA HES D6501 (3.4, 3.31);<br>NISSAN NES M0007 (2014-1) (24);<br>SAE J1545, J1767  |
| Color Crocking/Mar Resistance | AATCC Method 8; AATCC 107-2013;<br>CHRYSLER 463PB-54-01;<br>FORD FLTM BN107-01, FLTM BN108-10, FLTM BI 161-01<br>GM 9033P *(Inactive 7/13);<br>ISO 105-X12, ISO 15701;<br>RIVIAN RTS.1749, RTS.1750;<br>SAE J861; AATCC 107-2013;<br>TOYOTA BOSHOKU BSDM0502 (4.13);<br>VOLVO VCS 1026,84329  |
| Color Transfer                | GM9137P   |
| Conical Bend Test             | ASTM D522 (Method A)  |
| Condensing Water Vapor        | FORD FLTM BI 104-02   |

| <b>Test</b>   | <b>Standard</b>   |
|---|---|
| Corrosion and Corrosion Creepback                                 | ASTM D1654;<br>GM 9102P *( <i>Inactive 12/10</i> ), 9511P *( <i>Inactive 12/10</i> ),<br>GMW 3286, 15282, 15288;<br>ISO 9227 (5.2);<br>NISSAN NES M0158, NES M0007 (2014-1) (33);<br>SAE J1389;<br>TOYOTA TSH1555G (A);   |
| Cyclic Corrosion  | ASTM D6899:<br>CS-CORROSION ( <i>Section 4 only</i> ) (Component Level);<br>FORD FLTM BI 123-03, FLTM BI 123-01, CETP:00.00-L-467;<br>GM 9540P *( <i>Inactive 3/10</i> );<br>GMW14872;<br>ISO 11997-1;<br>NISSAN NES M0158; NES M0007 (2014-1) (34);<br>RIVIAN RTS.1681;<br>SAE J2334; SAE J2721;<br>TESLA TP-0000808, TP-0000588;<br>TOYOTA TSH1555G (A);<br>VOLKSWAGEN PV1210 |
| Dead Load Seam Strength   | ASTM D751 (80-83)   |
| Detergent Resistance  | ASTM D2248;<br>HONDA HES D6501 (3.27)   |
| Determination of Water Spotting                                   | GMW 14102   |
| Determining Fiber Degradation of Automotive Textiles              | GM 9771P;<br>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);<br>FORD FLTM BN105-03;<br>GM 7400M (3.2.3.1.7), 7451M (3.6), 7452M (3.5), 9452P;<br>GMW 4217;<br>SAE J315 (15)   |
| Durometer Hardness (Shore A and D)                                | ASTM D2240;<br>ISO 7619-1, ISO 868  |
| Dust – Out  | GM9635P *( <i>Inactive 6/13</i> ); GMW 16998  |
| Elongation  | ASTM D751 (17)  |

| <b>Test</b>   | <b>Standard</b>   |
|---|---|
| Environmental Cycle<br>Temperature:<br>(-40 to 250) °C<br>Humidity:<br>(30 to 95) %RH | ASTM D2126, ASTM D1000 (129-139);<br>BMW TP 303.4;<br>CHRYSLER 463LB-12-01 (A and B), 463PB-22-01;<br>DSM ESX-60210 (4.3.1, 4.3.2), ESX-60211 (4.3),<br>ESX-60256 (3.1), ESX-60261 (3.2), ESX-62310 (4.8),<br>ESX-83215 (3.4), ESX-83244 (3.3, 3.4, 3.5);<br>FCA 50184;<br>FORD FLTM BQ 104-07 ( <i>Except 7-9, 16-18</i> ),<br>FLTM BO 040-01, WSS-M99P32-C (3.8.1), WSS-M99P41-<br>A10/A72 (3.12.5, 3.22);<br>FUJI TS371-00-004 (29, 30, 30-2);<br>GM 3628M (3.3.6) *( <i>Inactive 3/11</i> ), 4383M<br>(3.2.3.1) *( <i>Inactive 12/10</i> ), 9200P (4.1), 9505P *( <i>Inactive 12/10</i> );<br>GMW 14124 ( <i>Except Cycle T</i> ), 14650 (4.3), 15725 (4.3);<br>HONDA HES D6501 (3.29);<br>HYUNDAI M3706-M-01 (4.4);<br>MAZDA MES MN601 (12), MES PWPT001A (7.6);<br>MERCEDES DBL 9202 (4.1.2);<br>NISSAN NES M0132, NES M0007 (2014-1) (46);<br>RIVIAN RTS.1741, RTS.1946 (METHOD B);<br>SAE J2100;<br>TESLA TP-0000706;<br>TOYOTA TSF7754G (5.2), BSDM0502 (4.1.3, 4.1.4, 4.9);<br>Volkswagen PV1200;<br>VOLVO DPR31834973 (8.3)<br>MERCEDES BENZ MBN 55555-4 ( <i>Except 5.4</i> ) |
| Fabric:<br>Mass Per Unit Area<br>Width of Textile Fabrics                             | ASTM D3776 ( <i>Except A</i> );<br>ASTM D3774, ASTM D1000 (11-20)   |
| Filiform Corrosion Resistance   | ASTM D2803; NISSAN NES M0007 (2014-1) (35); SAE J2635;<br>HONDA HES D6501 (3.16)  |
| Film Hardness   | ASTM D3363;<br>ISO 15184;<br>FIAT CHRYSLER FCA 50452/02;<br>FUJI TS371-00-004 (2, 3),<br>FUJI TS430-07-026 (2);<br>MAZDA MES MN601 (9);<br>NISSAN NES M0007 (2014-1) (s26., 62.)  |
| Film Thickness  | ASTM D7091;<br>FUJI TS371-00-004 (4);<br>ISO 2808 (Methods 6 & 7);<br>HES D6501 (3.5)   |
| Flaking Evaluation  | ASTM D772   |

| <b>Test</b>                   | <b>Standard</b>  |
|-------------------------------|--|
| Flammability                  | ASTM D350 (B), D5132<br>BMW GS 97038;<br>CMVSS 302;<br>CHRYSLER MSJP 9-4 (Steam and Burn);<br>FIAT CHRYSLER CP-508A; CP-5237LA;<br>DBL 5307.10;<br>DIN 75200;<br>DSM ESX-60410, ESX-62101 (4.10), ESX-83220 (4.24);<br>DOT TP-302-03;<br>FMVSS 302;<br>FORD ES-E97B-1011014-AA; EU BN 024-02,<br>GB 8410;<br>GM 9070P *(Inactive 9/11);<br>GMW 3232;<br>HONDA HES C206, HES D6003;<br>ISO 3795;<br>KMVSS 302;<br>MAZDA MES PWPT001A (7.10);<br>MS 300-8;<br>NISSAN NES0094;<br>PV 3904;<br>RIVIAN RTS.1733<br>SAE J369;<br>TL 1010;<br>TOYOTA TSF7754G (5.12);<br>TSM 0500G;<br>VOLVO VCS5031.19;<br>VSTD 19-1 |
| Flexural Properties           | ASTM D790, D1184, D6272;<br>ISO 178, 6272-2  |
| Fluorescent UV Exposure (QUV) | ASTM D4329, G53:1995, G154;<br>SAE J2020   |
| Foam Laminate Curl Test       | GM 9330P *(Inactive 9/12);<br>GMW 4089   |
| Fogging                       | FORD FLTM BO116-03,<br>GM 9305P;<br>GMW 3235;<br>RIVIAN RTS.1755;<br>SAE J1756;<br>TOYOTA TSM0503G Method B, BSDM0503  |
| Fuel Resistance               | DSM ESX-62310 (4.12), ESX-71227 (4.8);<br>FORD FLTM BO 101-05;<br>GM 9500P *(Inactive 8/10), 9501P *(Inactive 8/10),<br>9659P *(Inactive 12/10);<br>GMW 14650 (4.7), 14333, 17137;<br>MAZDA MES MN601 (18, 20)   |
| Gloss                         | ASTM D523;<br>FIAT CHRYSLER FCA 50457;   |

| <b>Test</b>                                   | <b>Standard</b>  |
|---|--|
| Gloss ( <i>continued</i> )                    | FORD FLTM BI 110-01;<br>FUJI TS430-07-026 (1-2);<br>HONDA HES D6501 (3.3);<br>ISO 2813   |
| Grain Retention of Interior Trim Materials    | GM 9142P   |
| Haze  | ASTM D4039, D1003 (Procedure B)  |
| Humidity                                      | ASTM D1735, D2247;<br>DIN 50017 ( <i>Constant Atmosphere only</i> );<br>DSM ESX-71227 (4.4), ESX-83215 (3.3);<br>FORD WSS-M99P41-A10/A72 (3.12.4);<br>GM 2617M (3.4.2.9) <i>*(Inactive 3/08)</i> , 4465P <i>*(Inactive 1/11)</i> ,<br>2210M (3.3.1.1, 3.3.1.2);<br>GMW 14729, 14650 (4.4);<br>HONDA HES D6501 (3.19);<br>HYUNDAI M3706-M-01 (4.7);<br>ISO 6270-02;<br>MERCEDES DBL 9202 (4.1.3);<br>NISSAN NES M0007 (2014-1) (32);<br>RIVIAN RTS.1743;<br>TOYOTA TSF7754G (5.7) BOSHOKU BSDM0502 (4.2, 4.2.1,<br>4.2.2);<br>VOLVO DPR31834973 (8.6) |
| Impact  | ASTM D5420, D2794;<br>CHRYSLER 463LB-11-01-C;<br>DSM ESX-60210 (4.11), ESX-62310 (4.7), ESX-83244 (3.10);<br>FORD FLTM BO151-01;<br>FUJI TS371-00-004 (9);<br>GM 9032P <i>*(Inactive 6/10)</i> , 9140P <i>*(Inactive 3/12)</i> ,<br>9302P <i>*(Inactive 3/14)</i> ;<br>GMW 14093 (Apparatus A);<br>ISO 6272-2;<br>MAZDA MES MN601 (33);<br>NISSAN NES M0134, NISSAN NES M0007 (2014-1) (27, 76,<br>77);<br>RIVIAN RTS.1776, RTS.1806 (METHOD A), RTS.1871<br>(METHOD A);<br>TOYOTA TSF7754G (5.3), BOSHOKU BSDM0502 (4.5,<br>4.5.1,4.5.2, 4.5.3)     |
| Interior Trim Hand Peel Strength              | GM 9907P <i>*(Inactive 03/01/11)</i>   |
| Irradiation Heat Resistance                   | DSM ESX-83215 (3.1);<br>GM 9310P; GMW 15432;   |
| Irradiation Heat Resistance ( <i>cont'd</i> ) | TOYOTA TSF7754G (5.1)  |
| Laminate Bond Strength                        | GMW 3220   |
| Laminate Softening Point                      | DSM ESX-83220 (4.23.2)   |

| <b>Test</b>             | <b>Standard</b>   |
|-------------------------|---|
| Mandrel Bend            | ASTM D522 (Method A and Method B);<br>FORD FLTM BN 102-01;<br>FUJI TS371-00-004 (34)<br>GM 3628M (3.6) *(Inactive 3/11),<br>7400M (3.2.3.1.3) *(Inactive 3/11), 9503P *(Inactive 6/12);<br>GMW 16746, 14108;<br>HONDA HES D6501 (3.10, 3.11)<br>MAZDA MES MN601 (31);<br>NISSAN NES M0007 (2014-1) (30)<br>SAE J323   |
| Mass Per Area           | GMW3182   |
| Melt Flow Rate          | ASTM D1238;<br>ISO 1133   |
| Mildew Growth           | FORD WSS-M5H34-A (3.12), WSS-M99P32-C (3.7);<br>GM 9128P *(Inactive 4/11);<br>GMW 3259  |
| Moisture Absorption     | FORD WSS-M99P32-C (3.11); GMW 16856   |
| Odor                    | CHRYSLER 463KC-09-01;<br>DSM ESX-62101 (4.9), ESX-83217 (4.5), ESX-83220 (4.22);<br>FORD FLTM BO 131-01, -03;<br>GM 9130P *(Inactive 6/15), 9832P *(Inactive 2/12);<br>GMW 3205;<br>MS 300-34;<br>RIVIAN RTS.1754;<br>SAE J1351;<br>TOYOTA TSM 0505G (Except 8.3); BOSHOKU BSDM 0505<br>Volkswagen VDA 270;<br>Volkswagen AG PV3900;<br>VOLVO VCS 1027,2729 |
| Oil Immersion Test      | GM 4350M (Appendix B) *(Inactive 12/13), ASTM D1000 (116-122), GMW14664 (3.7)   |
| Orange Peel Measurement | GMW 15777 Section 3.2.2   |



| <b>Test</b>   | <b>Standard</b>   |
|---|---|
| Oven Aging<br>Temperature:<br>(38 to 250) °C                          | ASTM D751 (72-79); D1000 (77-82)<br>Chrysler 463LB-13-01;<br>DSM ESX-60210 (4.4), ESX-60261 (3.15), ESX-60359 (4.9),<br>ESX-60523 (4.16), ESX-62101 (4.8), ESX-62310 (4.9);<br>FORD FLTM BN113-02, WSB-15P40-A (3.11),<br>WSK-M98P5-A (3.6), WSS-M99P32-C (3.8.2); WSS-M99P41-<br>A10/A72 (3.12.2, 3.12.3)<br>FUJI TS371-00-004 (30-3)<br>FUJI TS430-07-026 (10)<br>GM 2210M (3.3.1.1), 3628M (3.15) *(Inactive 03/11),<br>7452M (3.4) *(Inactive 12/13), 7453M (5.2)* (Inactive 03/11/11),<br>9504P* (Inactive 05/01/11);<br>GMW 14867 (3.9), 14650 (4.2), 15725 (4.5), GMW 17538<br>(3.4.1.1);<br>HES D6501 (3.20 excluding 3.8 and 3.17)<br>HYUNDAI M3706-M-01 (4.5)<br>MAZDA MES MN601 (11), MES PWPT001A (7.3, 7.4);<br>MERCEDES DBL 9202 (4.1.1);<br>NISSAN M0007 (2014-1) (15);<br>RIVIAN RTS.1946 (METHOD A);<br>TOYOTA TSF7754G (5.6); BOSHOKU BSDM0502 (4.1.1,<br>4.1.2, 4.1.5);<br>VOLVO DPR31834973 (8.4, 8.5);<br>Volkswagen VW 44045 (5.14) |
| Parting Line  | GM9684P *(Inactive 10/12);<br>GMW 15424   |
| Performance Specification for Cable-<br>to-Terminal Electrical Crimps | SAE/USCAR-21, Except 4.5.5  |
| Perspiration Resistance   | AATCC TM15-2013;<br>Chrysler 463KC-21-01;<br>FORD FLTM BI 113-07, FLTM BI113-06;<br>GM 9240P;<br>GMW 14296, AATCC TM15-2013;<br>HONDA HES D6501 (3.26);<br>SAE J1326  |
| Pile Distortion   | GMW 4141  |
| Print Resistance  | MAZDA MES MN601 (10)  |
| Puckering Resistance  | TOYOTA TSF7754G (5.11)  |
| RCA Wear Test   | ASTM F2357  |
| Resistance to Cold Crack of Folded<br>Materials                       | GMW 14126   |
| Resistance to Loop Pull-out of Floor<br>Carpet                        | GMW 14148   |

| <b>Test</b>   | <b>Standard</b>   |
|---|---|
| Resistance to Water and Soap Spotting   | FORD FLTM BI113-01  |
| Resistance to Water Wicking   | ASTM D751, 99-102;<br>SAE J913  |
| Retention Force Measurement   | GMW15525  |
| Sag Test  | GM 3628M (3.8) *(Inactive 3/11)   |
| Salt Spray  | ASTM B117;<br>DIN 50021 ( <i>Salt Spray only</i> );<br>DSM ESX-71227 (4.5);<br>GM 4298P *(Inactive 12/10);<br>GMW 3286;<br>ISO 9227;<br>HONDA HES D6501 (3.15);<br>HYUNDAI M3706-M-01 (4.11);<br>JIS Z2371;<br>NISSAN NES M0140;<br>SAE AMS2515 (3.6.4);<br>TSH1552G, TSC0511G, Section 6.12; |
| Scratch Resistance of Organic Coatings – Simulation of Car Wash Installations | FUJI TS371-00-004 (5),<br>FUJI TS371-07-026 (13);<br>GMW 14865  |
| Scratch Resistance of Organic Coatings and Self Adhesive Foils                | GMW 14698   |
| Scuff and Mar   | CHRYSLER 463DD-18-01, 463DD-18-02;<br>DSM ESX-60210 (4.9);<br>FORD FLTM BN108-13, BO 162-01;<br>GM 4367M (3.3.7), 9150P;<br>GMN 3943;<br>GMW 14130, 14688, ISO 1518-1;<br>ISO 1518-1;<br>NISSAN NES M0007 (2014-1) (55, 56);<br>RIVIAN RTS.0059   |
| 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);<br>GM 3628M (3.10) *(Inactive 3/11);<br>SAE J883   |
| Soil Resistance   | CHRYSLER 463KC-4-01;<br>DSM ESX-60261 (3.17), ESX-60411 (3.3), ESX-83217 (4.25);<br>FORD FLTM BN112-08  |
| Specific Gravity  | ASTM D792 (Method A);<br>NISSAN NES M0007 (2014-1) (s7.)  |

| <b>Test</b>                                 | <b>Standard</b>   |
|---|---|
| Stain                                       | ASTM D925 (Method A);<br>DSM ESX-60523 (4.11), ESX-83217 (4.13);<br>FORD FLTM BN103-01;<br>GM 9141P;<br>GMW 14864, GM 14132;<br>SAE J912  |
| Stain Resistance to Identification Markings | FORD FLTM BO112-06  |
| Standard Atmosphere                         | DIN 50014 (Class 2)   |
| Standard Conditioning of Organic Material   | GMW 3221  |
| Static Shear Test                           | GM 3608M (3.3) *(Inactive 3/10)   |
| Steam Resistance                            | FLTM BO 160-04  |
| Stickiness Test                             | TOYOTA BOSHOKU BDSM502 (4.12)   |
| Stiffness Testing                           | ASTM D1388 (Option A), D5732;<br>DIN 53362;<br>GMW 3390;<br>ISO 9073-7;<br>SAE J949   |
| Stretch and Set                             | GMW 3211;<br>SAE J855   |
| Sunscreen Lotion/Insect Repellent           | FORD FLTM BI 113-08;<br>GMW 14445   |
| Tackiness                                   | FORD FLTM BO 061-01<br>HONDA HES D6501 (3.12)   |
| Tear Resistance                             | ASTM D624, D1004, D3574 (Test F);<br>DSM ESX-60523 (4.6), ESX-83217 (4.9), ESX-83220 (4.7);<br>ISO 13937-2, 9073-4; LP-13160;<br>RIVIAN RTS.1773  |
| Tear Strength                               | ASTM D751 (16) (Procedure B - Tongue Tear Method), D2261  |
| Tensile Properties                          | ASTM D638, D952, D1708, D5034, D5733, D1876, D5587,<br>D412;<br>CHRYSLER 463LB-10-01;<br>DSM ESX-60256 (3.3), ESX-60359 (4.2), ESX-60523 (4.4, 4.5),<br>ESX-83217 (4.6, 4.8, 4.10), ESX-83220 (4.4.1, 4.5, 4.23.1);<br>FORD ESB-M11P8-A, ESF-3LE8A080-AA (IIIE),<br>FLTM BN113-01, FLTM BO113-0,3 FLTM BA 116-01, WSS-<br>M99P41-A10/A72 (3.33);<br>GMW 14695, 3326, 3010;<br>ISO 527-1, -2, 34-1, 9073-18;<br>NISSAN NES M0007 (2014-1) (67);<br>TOYOTA TSF7754G (5.8) |

| <b>Test</b>  | <b>Standard</b>   |
|--|---|
| Thermal-Oxidative Stability<br>Characteristics of Plastics         | ASTM D3012,<br>GM 9059P *( <i>Inactive 06/11</i> ); GMW 15725, 4.4;<br>ISO 4577   |
| Thermal Shock for Coating Adhesion                                 | FLTM BI 107-05;<br>CHRYSLER 463PB-64-01; LP.M061<br>GMW 15919;<br>GM 9525P *( <i>Inactive 04/14</i> )<br>RIVIAN RTS.1673  |
| Thickness  | ASTM B487, ASTM D1000 (21-27), D1813<br>ISO 2808 (Method 6A), 9073-2;<br>RIVIAN RTS.1778;<br>SAE AMS2515 (3.6.1)  |
| Thickness of Plastic Sheet – Weight<br>Method                      | FORD FLTM EU BN050-07   |
| Thickness Test for Padding Materials                               | FORD FLTM BN023-02  |
| Thumbnail Hardness Test  | GM 9507P  |
| Topcoat Materials Exterior<br>(Yellowing)                          | GM 4367M (3.3.15) *( <i>Inactive 08/01/2010</i> );<br>GMW 15433 Section 4.3   |
| Trapezoidal Tear   | ASTM D751 (32-35)   |
| Vibration Testing<br>(-40 to 150) °C<br>(5 to 2000) Hz<br>6600 lbf | FIAT 9.90111/02;<br>Ford ES-9L3T-14540-AA, ES-BR3E-6A949-AA,<br>ES-FR3E-6A949-AA, ES-FC44-8146-AA,<br>ES-CM5E-6A949-AA;<br>SAE J1455;<br>USCAR 20;<br>Volkswagen VW80101, VW80000<br>TOYOTA BOSHUKU BSDM0502 (4.4, 4.4.1, 4.4.2, 4.4.3) |
| Visual Color Difference Evaluation<br>with a Gray Scale            | AATCC Procedure 1;<br>ASTM D2616;<br>ISO 105-A02;<br>FORD WSS-M99P41-A10/A72 (3.12.1.1);  |
| Visual Evaluations   | ASTM D610;<br>GMW 15356, 15357, 15358, 15359;<br>ISO 105-A03  |

| <b>Test</b>                       | <b>Standard</b>   |
|-----------------------------------|---|
| Water Immersion                   | ASTM D870;<br>DSM ESX-60211 (4.6), ESX-71227 (4.3), ESX-83220 (4.12),<br>ESX-83244 (3.8);<br>FCA 50470;<br>FORD FLTM BI104-01, WSS-M99P41-A10/A72 (3.26);<br>HONDA HES D6501 (3.18, 3.35);<br>HYUNDAI M3706-M-01 (4.6);<br>GM 3628M (3.12) <i>*(Inactive 03/11)</i> , 9514P <i>*(Inactive 03/11)</i> ;<br>MAZDA MES MN601 (13);<br>NISSAN NES M0007 (2014-1) (57);<br>TOYOTA BOSHOKU BSDM0502 (4.3) |
| Water Impact Penetration          | AATCC TM42;<br>ISO 9073-17  |
| Water Jet Tests for Painted Parts | FORD FLTM BO160-04;<br>GM 9531P (Method B);<br>GMW 14797 (Table A1A), 16745   |
| Water Vapor Resistance            | SAE AMS2515 (3.6.5)   |
| Weight                            | DSM ESX-60523 (4.3), ESX-62310 (4.3), ESX-83217 (4.1),<br>ESX-83220 (4.2.1);<br>FORD FLTM BN 106-01;<br>GM 9337P;<br>GMW 3182;<br>SAE J860  |
| Xenon Exposure                    | ASTM G155;<br>FORD FLTM BN117-03,<br>GM 9125P (3.3) <i>*(Inactive 5/13)</i> , GMW 14162 Method D<br>ISO 105-B06;<br>NES M0135 (II), NES M0007 (2014-1) (48);<br>RIVIAN RTS.1744, RTS.1910<br>SAE J1885 <i>*(Withdrawn 1/08)</i> , J1960 <i>*(Withdrawn 1/08)</i> , J2412,<br>J2527;<br>TESLA TP-0000701   |

\*NOTE: This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.

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



## Accredited Laboratory

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*Sterling Heights, MI*

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### Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 30<sup>th</sup> day of July 2021.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 0414.01  
Valid to August 31, 2023

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