

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

SCI-LAB MATERIALS TESTING INC.  
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MECHANICAL

Valid To: October 31, 2010

Certificate Number: 2743.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of tests on Adhesives (Organic Resins), Glues, Paints, Varnishes, Inks, Coatings, Allied Products, Plastics, Resins, Rubbers, and Articles of Metal:

**TEST**

**TEST METHOD**

**Abrasion/Wear Resistance:**

Wearing Resistance to	5-SFZS-008-3
Wear Resistance	ASTM D1175; TSL 2100G
Abrasion Resistance of Plastics Materials to	ASTM D1242
Abrasion Resistance	ASTM D1630; NES M0136; NES M0141
Standard Test Method for Abrasion Resistance of	
Organic Coatings by the Taber Abraser	ASTM D4060
Abrasion Resistance of Transparent Plastic to Surface	ASTM D1044
Friction Induced Wear	DVM-0056-PA
Abraser Method Taber	GM 9150P
Car Wash Simulation Test	GM 9600P
Resistance to Abrasion-Taber Abraser	SAE J948
Abrasive Wear	SAE J965

**Adhesion/Cohesion:**

Adhesion by Tape Test	ASTM D3359; ASTM D3359A
Adhesion to Flexible Substrate	ASTM D413
Adhesion to Rigid Substrate	ASTM D429
Cohesive Strength of Sheet Plastics and Electrical	
Insulating Materials	ASTM D952
Cross Hatch Adhesion	DVM 0023-PA
Exterior paint System Adhesion	DVM-0023-PA
Adhesion Test	FLTM BO 106-01
Cold Shock Resistance	FLTM BU-109-02
Adhesion Requirement for External Plastic Trim	
Attached With Pressure	GM 3604 M
Adhesion Performance of Decorative Exterior Emblems	
and Script	GM 6271M
Knife Cross-Hatched Adhesion	GM 9502P
Molding and Emblem Adhesion Test Pluck Resistance	GM 9774P
Adhesion of Water Strips to Paint	GM 9896P

**TEST****TEST METHOD**

Bond Strength	LP 463LB-10-01
Adhesion	LP 463TB-11-01
Shear Adhesion	LP 463TB-8-01
Bond Strength	MIL-STD-883E-2011.7
Adhesive Water Dispersion Type	MS-CB 124
Cross Peel Test for Automotive Type Adhesives for Fibre	SAE J1553
Primary Adhesion	TS 371-0-4, (10)
Adhesive Specification for Interior Parts	0095Z-S04-0000
Test Method Specification for Adhesive (General)	0095Z-SDA-A000
Testing Methods for Adhesives for Automobiles	JIS K 6829
Double-Coated Adhesive Tapes for Interior Trim Materials	TSK5702G
Adhesion Requirements of Pressure Sensitive Adhesive Coated Parts (Minimal Stress)	GM3622M

**Ash Content:**

Ash Content in Thermoplastics	ASTM D5630
Determination of Ash Content	FLTM BO 006-01
Determination of Ash Content of Molding Materials	FLTM BO 006-02
Determination of Filler Content	FLTM BO 006-03
Resistance of Polyurethane Foam to Deterioration	FLTM BO 012-01
Determination of Inert Fillers in Polymers	FLTM BO 106-04
Ash Content of Molding Materials	FLTM EU BO 006-02
Ash Content	GM 9306P
Heat Exposure Test: Variable Surface	GM 9310P
Plastics - Determination of Ash	ISO 3451-4
Determination of Percentage Ash Solids	LP 463DB-13-01
Volatile Loss of Thermoplastic Materials	LP 463DD-4-01

**Bend Test:**

Bend Test for Coating Adhesion	FLTM BI 009-05
Bending Test	ISO 1209
Plastics - Determination of Flexural Properties	ISO 178
Flexural Modulus	JIS K7203
Low Temperature-Mandrel Bend Test (Brittleness)	LP 463AB-25-01
Brittleness Temperature of Plastic Sheeting by Impact	ASTM D1790
Test Method for Brittleness Temperature of Plastics and Elastomers by Impact	ASTM D746
Brittleness Evaluation by Means of a Mandrel	GM 9503P
Determination of the Brittleness Temperature by Impact	ISO 974

**Chemical Resistance:**

Resistance of Plastic to Chemical Reagents	ASTM D543
Fluid Resistance of Gasket Materials	ASTM F146
Chemical Compatibility	DVM-0027-MA
Fluid Spotting Resistance	DVM-0037-PA
Chemical Resistance	GM 7452M
Cleanability of Vinyl Coated Top Materials	GM 9147P
Gasoline Puddle Test	GM 9500P

**TEST**

Gasoline Dip Test  
Cleanability  
Acid Spot Test  
Resistance of Paint Films to Various Fluids  
Solvent Wipe Resistance Wipe Test  
Solvent Resistance, Migratory Staining, Ash Content  
Chemical Resistance Test Methods for Plastic Parts  
Chemical Resistance, Spot Test  
Motor Gasoline  
Kerosine

**TEST METHOD**

GM 9501P  
LP 463KC-04-01  
LP 463PB-06-01  
LP 463PB-31-01; LP 463PB-31-01B  
LP 463PB-7-01  
MS-DC634  
NES M0133  
ASTM D1308  
JIS K 2202  
JIS K 2203

**Cleanability:**

Cleanability of Exterior Grained Surfaces	DVM-0012-OR
Soiling and Cleanability	DVM-0017-MA
High Pressure Wash	DVM-0041-PA
Cleanability Test for Outside Vinyl Coated Material	FLTM BN 012-06
Resistance to High Pressure Cleaning	FLTM BO 160-04
Cleanability of Textiles and Plastics, Test for	GM 9126P
Cleanability of Vinyl Materials	GM 9156P
Exterior Finish High Pressure Water Wash	GM 9531P
Cleanability of Vinyl Coated Top Materials	GM 9147P
High Pressure Car Wash Resistance	MDT-060
Cleanability and Soil Resistance	GMW3402

**Coatings:**

Standard Test Method for Measurement of Coating Mass per Unit Area on Anodically Coated Aluminum Discontinuous Chromium Plating Thickness	ASTM B137-95
Coating Thickness by the Magnetic Method: Nonmagnetic Coatings on Magnetic Base Materials	ASTM B456
Method for Measurement of Thickness of Metallic Coatings by the Coulometric Method	ASTM B487
Plating Adhesion	ASTM B499
Standard Guide for Measuring Thickness of Metallic & Inorganic Coating	ASTM B504
Layers in Multilayer Nickel Deposit (STEP Test) Standard Test Method	ASTM B571
Method for Non-destructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base	ASTM B659
Dry Film Thickness of Non-Conductive Coatings Applied to a Nonferrous Metal Base	ASTM B764
Polycarbonated Door Outer Handle Coating	ASTM D1186
Quality of Coating for Interior Resin Parts	ASTM D1400
Specification for Front Windshield Side Garn	7214ZST7 0000 R4P21051E
Quality of Coating on Resin Exterior Parts	0096Z-SEC-A000
Water Resistance of Coating Using Water Fog Apparatus Testing	7315ZS5A 0000 R4Y21094E
Ignition Properties of Plastics	0096Z-SIE-E000
	ASTM D1735
	ASTM D1929

**TEST****TEST METHOD**

Test Method for Volatile Content of Coatings	ASTM D2369
Test Method for Chip Resistance of Coatings	ASTM D3170
Film Hardness by Pencil Test	ASTM D3363
Film Thickness by Notched Gages Wet	ASTM D4414
Bond Strength	ASTM D751
Exterior Clearcoat - Scratch Resistance on Rigid Substrates	DVM-0058-PA
Coating Quality Standard	DWG 0096Z-SM4-0000
Chip Resistance Test for Painted Materials	FLTM BI 007-01
Chip Resistance Test for Painted Panels	FLTM BI 157-05
Chip Resistance	FLTM BI 157-06
Mar Resistance Determination for Automotive Coatings	FLTM BI 161-01
Plastic and Tapes Resistance to Protective Waxes and Dewaxing Materials	FLTM BO 155-01
Stone Chip Resistance	FLTM EU BI 057-02
Measuring Thickness of Electrodeposites and Anodic Coatings	GM 4260P
Chip Resistance of Coatings	GM 9508P
General Test Method for Coating	HES D 6501-97
Microscopic Plating Thickness	HES D6001, 4.2
Determination of Loss on Ignition	ISO 1172
Film Build	ISO 2808
Chip Resistance on Surface Coatings	LP 463PB-39-01
Exterior Paint Acid Etch Resistance	PA-0145
Test Method for Chip Resistance of Surface Coatings	SAE J400
Test Method for Electrodeposition Film Properties	TSH 1551G
Coating Quality of Plastic Painted Parts	TSH 3111G
Coating Quality of Plastic Parts	TSH 3130G
Electrodeposited Coating of Zinc	TSH 6500G
Corrosion-Proof Coating (On Metals)	HES D 2021-07
Minimum Performance Requirements for Decorative Chromium Plated Plastic Parts	GMW14668
Stone Chipping	GMW14700
Metallic and Oxide Coatings – Measurement of Coating Thickness – Microscopical Method	ISO 1463
General Coating (On Resins)	HES D2018.99
Quality of Coating for Interior Resin Parts	0096Z-SEC-A000
Coating Quality of Exterior Parts	TSH3131G
Coating Quality Standard of ABS Resin Exterior Parts	0096Z-SM4-0000
Polycarbonated Door Outer Handle Coating	7214ZST7_0000_R4P21051E
<b>Cold Cracking:</b>	
Cold Flexibility	FLTM BN 102-01
Cold Impact Test	FLTM BO 151-01; FLTM BO 151-02; GM 9011P
Cold Flexibility of Plastic Film and Sheeting	FLTM EU BO 051-09
Cold Cracking Resistance of Interior Vinyl Materials	GM 9140P
Cold Slam Test	GM 9773P
Cold Cracking Resistance of General Trim Materials	LP 463LB-11-01
Pliability	LP 463LB-11-01B
Cold Impact Test-Bonded Moldings, Die-Cast	

**TEST****TEST METHOD**

Ornaments, and Appliqués	LP 463TB-9-01
Cold Cracking of Flexible Plastic Materials	SAE J323
<b>Colour/Crock:</b>	
Color Differences of Opaque Materials Visual Evaluation of	ASTM D1729
Color Differences From Instrumentally Measured Color Coordinate	ASTM D2244
Crocking Test	FLTM BN 107-01
Crockmeter Scuff Test	FLTM BN 108-10
Color Fastness to Rubbing	JIS L0823
Color Fastness to Rubbing Test Method for	JIS L0849
Color Bleeding Resistance to	LP 463KC-1-01
Crock Mar Resistance	LP 463PB-43-01
Crock Resistance	SAE J 861
Color Difference Measurement	SAE J1545
Crock Resistance, Dry & Wet	SAE J681
Color Change in by Ageing	TSL 0601G
Measurement Method of Surface Gloss for Interior Parts	0094Z-SFA-9000
General Principles of Testing Methods for Colour Fastness	JIS L0801
Grey Scale for Assessing Change in Colour	JIS L 0804
Test Methods for Colour Fastness to Xenon Arc Lamp Light	JIS L 0843
Test Method for Colour Fastness to Perspiration	JIS L 0848
Specular Glossiness-Methods of Measurement	JIS Z 8741
Criteria for Test for Quality of Color Change by Aging	TSL0601G
Compressive Properties of Rigid Cellular Plastics	ASTM D1621
Compressive Properties of Rigid Plastics	ASTM D695
Compression Set and Dry Recovery	FLTM BN 015-01; FLTM BN 015-02
Compression Set of Polyurethane Foam	FLTM BN 015-07
Compression Load Deflection	FLTM EU BO 052-01
<b>Compression:</b>	
Compression Deflection	GM 6086M
Determination of Compression Set	ISO 1856
Compression Test of Rigid Materials	ISO 844
Compression Test of Urethane Foam Materials	LP 463DB-5-03
Compression Set Resistance to	LP 463KB-5-01
Die Shear Strength	MIL-STD-883E-2019.5
Compression Recovery, Wet	SAE J1352
Compression and Recovery, Wet	FLTM BN 15-01
Compression and Recovery, Dry	FLTM BN-15-2
<b>Corrosion:</b>	
CASS Corrosion Resistance	ASTM B368
Corrosive Environments	ASTM D1654
Fan Cyclic Corrosion Test	DVM 0066-CF
Corrosion	DVM-0008
Painted Sheet Metal Corrosion Test	FLTM BI 123-01

**TEST****TEST METHOD**

Component Corrosion Resistance	FLTM BI 123-03
Acid Dissolution Test for Decorative Aluminum Parts	FLTM BQ 007-02
Corrosion Resistance	FLTM BQ 105-01
Acetic Acid Salt Spray Copper (Fog-CASS Test)	GM 4476P
Creepback Test - Corrosion	GM 9102P
Corrosion Creepback of Paint on Metal Substrate	GM 9511P
Corrosion Test	GM 9540P
CASS Exposure	NES M0138-91
Cyclic Corrosion Test Procedures for Painted Automotive Parts	SAE J1563
CASS Test	GMW14458
Cyclic Corrosion Laboratory Test	GMW14872
Corrosion Resistance Test	HES D2003
Corrosion Resistance for Plated Parts	ISC-E00-005-5.1
Laboratory Cyclic Corrosion Test	SAE J2334
Corrosion-Proof Coating (On Metals)	HES D 2021-07; DOC070619
Accelerated Corrosion Under Complex Environment	TSH1555G

**Deflection:**

Deflection Temperature of Plastics Under Flexural Load	ASTM D648
Loading	IP-0021
Load Deflection Test	LP 463AB-5-04
Load Deflection Test	LP 463AB-5-08

**Density/Specific Gravity:**

Density	ASTM B328
Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25/25°C	ASTM D1963
Test Method for Specific Gravity (Relative Density) and Density of Plastics by Displacement	ASTM D792
Density, Bulk Factor, and Pourability of Plastic	ASTM D1895
Methods for Determining the Density and Relative Density of Non-Cellular Plastics	ISO 1183
Determination of Apparent Density	ISO 845
Determination of Specific Gravity	LP 463FB-2-01
Plastics- Methods for Determining the Density and Relative Density of Non-Cellular Plastics	JIS K 7112

**Dimensional Stability:**

Substrate Surface Appearance and Smoothness	DVM-0006-PA
Dimensional Stability-Interior Trim	DVM-6394
Overall Appearance	DY-0001
Determination of the Surface Roughness of Cold Rolled Sheet Steel	FLTM BA 003-01
Surface Roughness	FLTM BA-003-01
Dimensional Stability Test for	GM 7400M
Dimensional Stability	ISO 2796
External Visual Inspection	MIL-STD-883E-2009
Internal Visual Inspection	MIL-STD-883E-2010.10
Resistance to Sagging	SAE J1530A

**TEST****TEST METHOD**

Dimensional Stability	SAE J1717
Environmental Cycling/Dimensional Stability	SAE J1717, C85
Dimensional Stability of Automotive Textile Materials	SAE J883
<b>Environmental/Ageing:</b>	
Sunload Resistance	31826-SDS
Heat Age Exposure	32163-SDS
Heat Resistance to:	7710Z-S3VA-A010-M1
Xenon Arc-Type Light Exposure Apparatus With and Without Water for:	ASTM D2565
Heat Ageing of Plastics Without Load	ASTM D3045
Fluorescent UV-Condensation Light-& Water Exposure	ASTM D4587
Carbon Arc Weathering Apparatus	ASTM D750
Environmental Exposure	DVM -19195; DVM -19298
Sunload Resistance	DVM-31826
Heat Age Exposure	DVM-32163
Accelerated Light Resistance	ES-X33035; ES-X60210; ES-X83239
Color Matching with Artificial Light	FLTM BI 109-01
Fade (SAE J1885) Resistance of Materials to Accelerated Exposure of Automotive Exterior Materials by Xenon Arc (SAE J1960)	FLTM BN 101-01
Environmental Cycling	FLTM BO 101-03
Resistance of Materials to Fade (SAE J1885)	FLTM BQ 104-07
Xenon Arc Resistance to Artificial Weathering	FLTM EU BN 001-01
Cycle Exposure	FLTM EU BO 050-01
UV Heat Exposure	GM 3602M
Test for Thermal-Oxidative Stability Characteristics of Plastics	GM 3803M
Carbon (Xenon) Arc Weatherometer Test	GM 9059P
Accelerated Ageing and Steaming	GM 9125P
Oven Ageing Test for Painted Plastics Substrates	GM 9200P
Automotive Environmental Cycles	GM 9504P
Light Aging Exposure	GM 9505P
Thermal Shock	HES D 6601
Environmental Stability	IEC 66-2-38
Accelerated Aging Tests	IP-0023
Heat, Humidity and Cold Ageing Test for Adhesives	ISO 2440
Weatherometer Test of Automotive Type Trim Materials	LP 463CB-10-01
Fadeometer Test-Automotive Trim Materials	LP 463KB-12-01
Heat Ageing of Trim Materials	LP 463KB-7-01
Weather-Ometer Test	LP 463LB-13-01
Fade-Ometer Test	LP 463PB-16-01
Environmental Cycling/Resistance to Temperature Cycling	LP 463PB-17-01
Ageing	GMW14124
Heat Aging Performance (Type II Oven)	GMW3232
Weather Resistance	ISO 188
High Temperature Test	LP 463TB-2-01
High Temp Test	MIL-STD-810E-501.3
Low Temp Test	MIL-STD-810F-501.4
	MIL-STD-810F-502.4

**TEST**

Temperature Shock  
Rain Method  
Humidity  
Sand and Dust  
Immersion  
Stabilization Bake  
Heat Cycle Resistance, Fading Resistance, Chemical  
Resistance, Scratch Resistance  
Infrared Exposure  
Sunshine Weatherability  
Resistance To Heat Aging  
Accelerated Exposure of Automotive Interior Trim  
Components (Xenon Arc)  
Accelerated Exposure of Automotive Exterior Materials  
Using a Controlled Irradiance Water-Cooled Xenon Arc  
Apparatus  
Accelerated Environmental Testing for Bonded  
Automotive Assemblies  
Xenon-Arc Apparatus  
Test Method for Weather Resistance of Paint Film  
Sunshine Carbon Arc  
Carbon Arc Test Methods for Accelerated Weathering  
Resistance of Carbon Arc Weatherometer Test  
Accelerated Exposure of Automotive Exterior Materials  
Using A Controlled Irradiance Xenon-Arc Apparatus  
Environmental Characteristics  
Specification for Carpet Light Resistance  
Light-Exposure and Light-and-Water-Exposure  
Apparatus (Enclosed Carbon-Arc Type)  
Light-Exposure and Light-and-Water-Exposure  
Apparatus (Xenon-Arc lamp type)  
Test Method of Weatherability for Automotive parts  
Plastics-Methods of Exposure to Laboratory Light  
Sources (Open-Flame Carbon-Arc Lamps)  
Light Transmittance of Paint Film  
Xenon-Arc Lamp Type for Accelerated Weathering  
Resistance of Paint Film  
Carbon-Arc Lamp Type for Accelerated Weathering  
Resistance of Paint Film

**Fatigue:**

Wear Resistance  
Cycling Fatigue  
Heat Generation and Flexing Fatigue in Compression  
Flex Fatigue

**Flammability:**

Test Method for Rate of Burning and/or Extent and Time  
of Burning of Self-supporting Plastics in a Horizontal  
Position

**TEST METHOD**

MIL-STD-810F-503.4  
MIL-STD-810F-506.4  
MIL-STD-810F-507.4  
MIL-STD-810F-510.4  
MIL-STD-810F-512.4  
MIL-STD-883E-1008.2

MS-210-05  
NES M0131-94  
NES M0135-96  
SAE J1717, B85

SAE J1885

SAE J1960

SAE J2100

SAE J2212

TSH 1512G

TSH 1528G

TSH 1582G

TSM 5512G

SAE J2527

7244Z-SJA-A010-MI

8330Z-S9V-0000

JIS B 7751

JIS B 7754

JIS D 0205

JIS K 7350-4

TSH1520G

TSH1585G

TSH1582G

ASTM D3884

ASTM D4482

ASTM D623

CPNM-MOS-ST-10-04-07-E

ASTM D635



## **TEST**

Flammability of Interior Material  
Flammability Test for Trim Materials  
Flammability Test for Automotive Materials  
Flammability Test for Automotive Interior Materials  
Flammability

Flammability of Automotive Interior Materials-  
Horizontal Test Method

Flammability of Materials, Requirements  
Flammability of Materials

Flammability of Automotive Interior Trim Material  
Flammability for Interior Parts

Flammability of Interior Materials for Automobiles  
Flammability of Automotive Interior Materials-  
Horizontal Test Method

Flammability of Automotive Interior Materials  
Flammability of Plastic Materials for Parts in Devices  
and Appliances

Flammability  
Flammability for Non-Metallic Materials in Engine  
Compartment

### **Flexible Materials:**

Specification for Flexible Cellular Materials Sponge or  
Expanded Rubber

Flexible Cellular Materials-Slab, Bonded, and Molded  
Urethane Foams

Flexible Cellular Materials Made from Olefin Polymers  
Flex Properties of Un-reinforced and Reinforced Plastics  
& Electrical Insulating Materials

Stress Crack Resistance

### **Fogging:**

Fogging Test (SAE J1756)

Fogging Test (SAE J1756)

Fogging Test

Fogging

Glass Fogging

Fogging of Interior Material

Test Procedure to Determine the Fogging Characteristics  
of Interior Automotive Materials

Fogging Test Method for Non-metallic Materials

Fogging Test

Fogging, Photometric Method

Method of Fogging Test for Interior Materials

### **Hardness:**

Hardness

Indentation Hardness

Scale R, L, M, E, K

(A2LA Cert. No. 2743.01) 03/16/09

## **TEST METHOD**

ES-X60410

FLTM BN 024-01

FLTM BN 024-02; FLTM BN 24-2

FLTM EU BN 024-02

FMVSS 302; HES C206; HES D 6003; ISO 3795;  
MES CF 050; MS-300-8; TSM 0500G

FMVSS 571.302

GM 6090M

GM 9070P

LP 463KC-13-01

MES CF050D

NES M0094

SAE J369

SAE J393

UL 94

GMW3232

TSM0504G

ASTM D1056

ASTM D3574

ASTM D3575

ASTM D790

TS 371-0-4, (33)

FLTM BO 016-02

FLTM BO 116-03

FLTM EU BO 016-02; GM 9305P

GM 2212; LP 463DB-12-01; TSL 57056

HES D 6508

HES D 6508-95

SAE J1756

TSM 0503G

DIN 75 201

GMW3235

NES M0161

ASTM D1415

ASTM D1474

ASTM D785

**TEST**

Standard Hardness Conversion Tables for Metals  
Microhardness of Materials Test Method for  
Microhardness  
Pencil Hardness of Paint Films  
Hardness  
Hardness Test and Hardness Number Conversions  
Determination of Hardness (Indentation)  
Determination of Indentation Hardness by Means of a  
Durometer (Shore Durometer)  
Pencil Hardness Test  
Hardness Test and Hardness Number Conversions  
Test Method for Hardness of Paint Film  
Hardness Testing Methods for Rubber, Vulcanized or  
Thermoplastic

**Haze:**

Haze and Luminous Transmittance of Transparent  
Plastics  
Haze of High-Gloss Surfaces  
Standard test method for Specular Gloss  
Glass Haze

**Humidity:**

Humidity Ageing  
Practice for Test Water Resistance of Coatings in 100%  
Relative Humidity  
Humidity Aging for Tape Attachments  
Humidity Resistance  
Humidity Test  
Composite Temperature /Humidity Cyclic Test  
Humidity Cabinet Test  
Resistance to Humidity, Hot, and Cold Cycling of Trim  
Materials  
Humidity Exposure  
Condensing Humidity Resistance Test  
Humidity  
Procedures for High Humidity Test

**Impact:**

Cold Impact  
Impact Resistance of Plastic Film by Free-Falling Dart  
Method  
Test Methods for Impact Resistance of Plastics and  
Electrical Insulating Materials  
Test Method for Impact Resistance of Rigid Plastics  
Sheeting or Parts by Means of a Tup (Falling Weight)  
Impact Resistance by Means of a Falling Weight (Tup)  
(Gardner)  
Interior Impact  
Test for Determining Impact Strength of Plastics  
(A2LA Cert. No. 2743.01) 03/16/09

**TEST METHOD**

ASTM E140  
ASTM E384  
ASTM E92; GM 9054P  
FLTM BI 151-01  
GM 6010M; SAE J1237  
GM 9053P  
ISO 2439  
  
ISO 868  
LP 463PA-2-01  
SAE J417  
TSH 1500G  
  
JIS K 6253

ASTM D1003  
ASTM D4039  
ASTM D523  
TSM 1564G

32067-SDS; DVM-32067; LP 463AB-24-01

ASTM D2247  
DVM-19297  
FLTM BI 104-02  
GM 4465P  
IEC 68-2-38 Test Z/AD:  
LP 461H-15

LP 463LB-12-01  
LP 463PB-09-01  
LP 463PB-9-01  
MIL-STD202F-103B  
GMW14729

77211-SJC-A000-20

ASTM D1709

ASTM D256

ASTM D3029

ASTM D5420  
FMVSS 201  
GM 9032P

**TEST****TEST METHOD**

Impact Test for Plastic Materials	GM 9300P
Impact Test Exterior Body Side Moldings	GM 9528P
Multi-Axial Impact	GM 9904
Impact Resistance	HES D 2500
Impact Durability	Honda 3575Z-SNA-0000, 3.18
Test Ef: Impact, Pendulum Hammer. Amendment 1 (1993)	IEC 68-2-62
Determination for Multiaxial Impact Behaviour of Rigid Plastics - Falling Dart Method	ISO 6603-1
Multi-Axial Impact Testing	ISO-6603-2
Izod Impact Test	JIS K7110
Impact Test	LP 463DB-14-01
Impact Resistance	LP 463PB-19-01
Falling Ball Impact test Methods for Synthetic Resin Parts	NES M0134
Cold Impact	PF-11014, 3.3
Impact Resistance Plastic Parts (Gardner)	PF-4992
Impact Resistance Seat System Plastic Ornamentation	ST-0005
Impact Resilience	TSL-3505G
Door LNG Side Impact Specification	8352ZSZA_A000
Specification for Front Door LNG Side Impact	8352Z-TA0A-V000
High Impact PP for Center Pillar Lower	8412Z-SEP-A020-M2
Side Impact Spec for Door LNG Side Impact	8352Z-STXA-A000
Spec for RR Door LNG Side Impact	8373Z-TA0A-V000
Direct & Reverse Impact	ASTM D2794
Impact Resistance	GMW14093
Izod Impact Strength	ISO 180/1A

**Melt & Melt Flow Rate:**

Flow Rates of Thermoplastics by Extrusion Plastometer	ASTM D1238
Melt Flow Rate	ISO 1133

**Miscellaneous:**

Thickness	ASTM D5736
Mass	SAE J860
Resilience Using a Rebound Pendulum	ASTM D1054
Standard test Method for Boiling Point of Engine Coolants	ASTM D1120
Volatile Loss From Plastics Using Activated Carbon Materials	ASTM D1203
Softening Point	ASTM D1525
Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings	ASTM D1599-99
Stress-Cracking of Ethylene Plastics	ASTM D1693
Water In Liquid Petroleum Products by Karl Fischer Reagent	ASTM D1744
Particle Size (Sieve Analysis) of Plastic Materials	ASTM D1921
Weight Loss of Plasticizers on Heating	ASTM D2288
Specular Gloss of Plastic Films	ASTM D2457
Resilience by Vertical Rebound	ASTM D2632

**TEST****TEST METHOD**

Heats of Fusion and Crystallization of Polymers by Thermal Analysis	ASTM D3417
Transition Temperatures of Polymers by Thermal Analysis	ASTM D3418
Mass	ASTM D3776
Specular Gloss Standard Test Method for Flash Point	ASTM D523
Standard Test Method for Determination of Moisture in Plastics by Loss in Weight	ASTM D56
Plasticity and Recovery (Parallel Plates Methods)	ASTM D6980-04
Creep Relaxation of a Gasket Material	ASTM D926
Water Resistance	ASTM F38
Seat System Material Performance	DVM-0026-PA
Surface Friction	DVM-0005-ST
Wax Build-Up on Grained Surfaces	DVM-0011-BPv3
Contaminants in Textile Material, Test of Under-Vehicle and Under-Hood Component Rating Scale	DVM-0013-OR
Mildew Growth	FLTM AN 101-03
Compatibility of Vinyl Materials and Leather	GM 8101G
Stress Mark Susceptibility	GM 9128P
Dust Out Test	GM 9141P
Fiber Degradation	GM 9302P
Tape Wet-Out Test	GM 9635P
High Altitude Test	GM 9771P
Hydraulic Fluid Power - Fluids - Method for Coding the Level of Contamination by Solid Particles	GM 9837P
Method for Moisture Rain & Spray Test for Automobile Parts	IEC 68-2-13
Friction Index	ISO 4406
Resistance to Bearding and Fuzz	JIS D0203
Water Spot and Soap Spot Test	LP 463AB-52-01
Softening Temperature of Plastics - Vicat	LP 463KB-21-01
Separation Strength	LP 463PB-8-01
Resistance to Water Wicking	LP 463TB-14-01
Surface Match Verification Method for Pressure Sensitive Adhesively	NES M0152
Load Test	SAE J1913
Test Method Regarding Material Properties for Plastic Consoles	SAE J2215
General Test Methods for Vinyl Leathers	SPP-GTP-2005
Moisture Content	TSF 7354G
General Test Method for Plastic Parts	TSL 5100G
Safety Pad Materials with Vacuum-Formed Outer Layer	TSL 3505G
FT-IR	TSM 0502G
Interior Emissions - Plastics	TSM 6700G
Specification for Inner Garnish Front/Rear Door Sash	ASTM E168
Specification for Front Inner Fender	GMW8081
Specification for PLR Garnish	7244Z-STKA-A000
Specification for Assembly Trunk Parts (General)	7410Z-SDA-A000

**TEST**

Specification for test method for VOC  
Specification for V/F TPO I/P Skin  
Specification for Curlfit  
AS Seamless SRS System Specification  
Specification for Floor Carpet with Insulator  
Specification for Internal Collision Material  
Specification for Preformed TPO V/F Composite  
AS Seamless Srs System Specification  
Specification for RR Side LNG Assy  
Specification for Assy LNG, Door/side (General)  
Specification for Door LNG Assembly  
Fabric Spec for Trim Cover, Seat  
Spec for Assy LNG, Door/Side (General)  
PP Resins for Automobiles  
Genuine Leather (Chrome Free) for Trim Cover, Seat  
Seamless I/P Spec for WZXA  
Spec for High Wear Center Console and Door Lining  
Armrests  
Inst Panel Spec for TK4  
V/F TPO I/P Skin Spec for TK4  
Seamless I/P Spec for TK4  
General Rules of Dust Test for Automobile Parts  
General Rules for Inspection of Steel  
Alloy Tool Steels  
Permanent Set Testing Methods for Rubber, Vulcanized  
or Thermoplastic  
Plastics-Film and Sheeting-Determination of Tear  
Resistance (Trouser Tear Method)  
Heat Shrinkage Plastic Films for Packaging  
Test Powders and Test Particles  
Felt for Automobiles  
Substance Use Restrictions  
Testing Methods of Physical Property for Thermoplastics  
Mud Guard Set-Ctr (Nissan Design Spec)  
Emblem (Rad Grille)  
FIN-Door  
MLDG Set-Side  
Thermoplastic Olefin Seat for Automobiles  
Analyzing Content of Substances of Environmental  
Concern in Automotive Materials and Parts  
Polypropylene Foam Resin Molding Materials for  
Energy Absorber for Bumper  
Material Properties for Plastic and Polyurethane Bumper  
Covers and Front Spoilers  
Material Properties of Plastic Scuff Plates  
Material Properties for Pillar Garnishes  
Standard Test Methods for Woven Fabrics and Knitted  
Fabrics  
Polyacetal Resin Molding Materials  
Material Properties for Plastic Side Mud Guards  
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**TEST METHOD**

0094Z-SNA-0000  
7710ZSTX\_A211M1\_C4625320\_E  
7729Z-S5A-0000  
7785Z-STX-A810-M1\_C4624034\_E  
8330Z-STX-A010-M1  
8412Z-S5A-A010-M1  
7710Z-STXA-A210-M1  
7785Z-STXA-A810-M1  
8461Z-SZAA-V000  
8350Z-SNA-0000  
8350Z-SNA-N000  
8102Z-SDAX-A500  
8350Z-SDA-9000  
HES C 252  
8102Z-SEP-A000  
7710Z-WZXA-R800  
  
8341Z-S84-A000  
7710ZTK4\_A110M1  
7710ZTK4\_A210M1  
7710ZTK4\_A910M1  
JIS D 0207  
JIS G 0303  
JIS G 4404  
  
JIS K 6262  
  
JIS K 7128  
JIS Z 1709  
JIS Z 8901  
NES M7101  
NES M0301  
NES M8020  
76850NDS00  
62890NDS00  
80900NDS00  
76840NDS00  
NES M7108  
  
TSZ0003G  
  
TSM5725G  
  
TSF1354G  
TSF2254G  
TSF7755G  
  
TSL2100G  
TSM5515G  
TSF3256G

**TEST****TEST METHOD**

Acrylonitrile X Styrene Resin Molding Materials Dust Test, Free Settling Dust, 3 Day Exposure	TSM5523G IEC 68-2-68, 1994
Dust Test, Free Blowing Dust, 4h Exposure, Airflow Containing Coarse Dust	IEC 68-2-68, 1994
Dust Test, Free Blowing Dust, 4h Exposure, Airflow Containing Fine Dust	IEC 68-2-68, 1994
Lint/Fiber Durability Test	SOP 420-41-01
Water Ingress Test	BS EN 60529, Sect. 14.2.1, IPX1
Water Ingress Test	BS EN 60529, Sect. 14.2.2, IPX2
Specification for Front Windshield Side Garn Handle Assembly, Tailgate prelim Spec.	7315ZS5A_0000_R4Y21094_E 7481ZSZAAA000_SZAAF2387_E
Wheel Assy, Strg for SNA	7850ZSNA_N901_R4523058_E_
General Test Methods For Fabrics	HES D6506-00
Specification for New Light Felt	8330Z-SV4-J010-M1
General Test Methods for Resin Materials for Vehicles	HES D2500-99A
Test Methods for PP Resin Materials for Interior of Automobiles	HES D2502-02
Specification for BJ4H-HC Polypropylene Material	0094Z-S3V-A200
Instrument Panel Specification for SZAA	7710Z-SZAA-V000 DOC070529
General Test Methods for Plating	HES D6001-04A
Electroplating (for Corrosion Prevention, Rust Prevention and Decoration)	HES D2003-04
Volatile Component Measurement Method Using Sampling Bag (VOC)	TSM0508G
Measuring Volatile Substances Under Heat Desorption Method	TSM0509G
Control Method for Substances of Environmental Concern	TSZ0001G
Indication Method of Material Marking for Plastic Parts and Rubber Parts	TSZ6005G
General Test Methods for Boards	TSL3101G
Hardboards	TSL3503G
Fabrics for Trims and Console Doors	TSL2613G
Material Properties for Package Tray Trim	TSF7360G
Test Method for Door Trim Material Characteristics	TSF7754 G
Package Tray Trim Cover Materials	TSL 3607G
Engineering Spec. A/C Duct	VE-3W1H-19893-AA

**Molding of Plastics:**

Shrinkage from Mold Dimensions of Molded Plastics	ASTM D955
Molding Impact Test	DVM-14144v4
Molding Retention	MTL 4333
Mold Shrinkage of Injection Molded Thermoplastics	SAE J1639
New Flocking Specification for Molded Parts	8410Z-SE3-0001

**Durability & Performance:**

Nissan Design Spec - Nozzle-Def	27800-NDS00
Nissan Design Spec - Duct-Vent	27860-NDS00
Light Aging, Friction Resistance, Scratch Resistance	7710Z-S2K-9000

**TEST**

Specification for ISNT Parts (General)  
General Spec Inst. Parts  
SEPA Spec Inst Panel  
TPU SKIN Specification for SEPA  
SEPA Seamless IP  
SOK Inst Panel  
Garnish Testing  
Air Register Life Cycle  
Cup Holder Life Cycle  
Inside Door Handle Specifications  
Garnish Assembly  
Mechanical Shock & Drop Test  
Lock Assembly Durability  
Decorative Chromium Plating - Copper, Nickel,  
Chromium Type  
Performance Requirements for Exterior Plastic Parts  
Interior Part Finish Durability  
General Specification for Electrical/Electronic  
Component Analytical/Development/Validation (A/D/V)  
Procedures for Conformance to Vehicle Environmental,  
Reliability, and Performance Requirements  
Test Method for Connectors  
Chipping Resistance  
Hood Latch Ajar Switch Specifications  
Side Door Module System  
Lightbar  
Power Cinch & Power Quick Release Liftgate Latch  
System  
Cargo Door Latches & Strikers  
Air Register Operating Efforts  
Plasticized Polyvinyl Chloride Compounds  
General Motors Lambda System Test Specification  
Material Standard, Vinyl for Automobiles  
Test Method for Fabrics, Carpets  
Instrument Panel Common Standard  
Automobiles Parts Standard, Decoration Film (for  
Interior)  
Crash Pads  
Glove Lid Assy  
Automobiles Parts Standard, Consoles  
Automobiles Parts Standard, Ashtrays  
Interior/Exterior Plastic Parts for Decoration  
  
Altitude Test  
Constant Acceleration  
Mechanical Shock  
Vibration- Variable Frequency  
Washer System Windshield  
Air Leakage  
Open/Close Life Cycling

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**TEST METHOD**

7710Z-SCC-9000  
7710Z-SCC-9001  
7710Z-SEP-A010-M1  
7710Z-SEP-A210-M1  
7710Z-SEP-A810-M1  
7711Z-SOK-A011-M1  
8420Z-SLJ-0000  
DVM 0041-IP  
DVM-0004-IP  
Z10419 (08/20/02)  
DWG 74300-ASJCA-A020  
ES-6L2T-14540-AB, 5.31  
ES-84510  
  
GM 4372M; GM 4373M; GM 4374M  
GM 7452M; GM 7452M  
GM N10083  
  
GM W3172  
HES D3127  
HES D6500  
ICS 000007601 07 GMX001  
ICS Z10296-E00 U222/228 and 354  
ICS Z10432 HB  
  
ICS Z10450 GMT920/930  
ICS Z10463 ND  
IP-0115  
JIS K6723  
MCS E.S.000003970-02  
MES MN 401D  
MES MN 405  
MES PA 55000B  
  
MES PA 55219A  
MES PA 60350C  
MES PA 64030B  
MES PA 64390A  
MES PA 64610C  
MES PW PT001C; MES PW PT001E; MES PW  
PT001E  
MIL-STD-810F-500.4  
MIL-STD-883E-2001.2  
MIL-STD-883E-2002.3  
MIL-STD-883E-2007.3  
PF-10563  
PF-10799 Sec 4.4  
PF-10915, 5.1

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**TEST****TEST METHOD**

Life Cycle Test	PF-11014, 7.2
Integral/Modular Door Latch & Power Door Actuator	PF-8684-A
Door Inside Handle Specifications	PF8926
Door Inside Handle and Lock Knob Assemblies Plus All Appliqués (Bezels) and Individual Locking Controls	PF-8926
Door Inside Handle and Lock Knob Assy	PF-8926
Reclining/Rearward Folding Seat Back Life Cycle	ST-0051
Resonance Point Test	TSE 2512G
Test Method for Material Properties of Plastic Instrument Panel Assemblies	TSF 7350G
Performance Test	TSF 7358G
Durability Test	TSF 7359G
<b>Odor:</b>	
Hot Odor Test for Insulation Material	SAE J1351
Odor	TSM 0505G
Staining, Odor Test	WSB-M2D402-A3
Method of Testing the Smell of Interior Parts	NES M0160
Hot Odor Test for Insulation Materials	CPNM-LOS-ST-10-06-07-E
Odor Test	CPNM-MOS-ST-10-04-08-E; FLTM BO 131-01; LP 463KC-09-01
Odor Testing	MS-300-34; TSM-6709G-4
<b>Operational:</b>	
Squeak and Rattle	DVM 0002-IP
Operation Efforts	IP-0022
Operational Durability	MES PA 64410C
Durability Test Method for Console Compartment Door Opening and Closing	TSF 7356G
Overload Test Method for Console Compartment Door	TSF 7357G
Operational Travel, Load, Abuse, River Push Out	Z10419 (08/20/02)
Strength and Durability of Door Armrests	TSF 7206G
Durability Test Method for Shifting Hole Cover	TSF 7303G
Strength and Durability of Glove Compartment Door	TSF 7304G
Strength and Durability for Assist-Grip	TSF 7363G
<b>Paints:</b>	
Blistering of Paints Standard Test Method for Evaluating Degree of:	ASTM D714
Water Resistance Test for Exterior paint	DVM-0026-PA
Exterior paint System Chip Resistance - Grit Blast Method	DVM-0039-PA
Exterior paint System Chip Resistance- Gravelometer Method	DVM-0040-PA
Exterior Paint Acid Etch Resistance	DVM-5861
Quality of TPU Plastic Exterior Brilliant Flexible Paint	DWG 096Z-S5N-C000
Water Immersion Test for Painted Panels and Parts	FLTM BI 104-01
Paint Adhesion Test	FLTM BI 106-01
Measurement of the Gloss of Paint Panels	FLTM BI 110-01
Thickness Measurement of Paint Films	FLTM BI 117-01



**TEST****TEST METHOD**

Resistance to Abrasion-Taber Abraser	FLTM BN 108-02
Resistance to Scuffing	FLTM BN 108-04
Colorfastness to Crocking	GM 9033P
Tape Adhesion Test for Paint Panels	GM 9071P
Scuff and Mar Resistance	GM 9150P
Dime Scrape Test for Paint Adhesion and Brittleness	GM 9506P
Thumbnail Test for Paint Parts	GM 9507P
Taber Abraser Method	GM 9515P
Cleaning/Solvent Resistance	GM 9900P
Scuff Resistance Test for Painted Plastics	GM 9911P
Paint Finishes Test Method for	ISC-E00-006
Cycle Testing of Painted Surfaces	LP 463B-22-01
Cycle Crack Resistance	LP 463PB-22-01
Fluid Immersion Test	LP 463TB-13-01
Paint Film	MES MN 600H
Paint Film Test Method for	MES MN601
Paint Testing	MS-PD-48-1
Automotive Paint Testing Method for	NES M 0007
Test Method for Print Resistance of Paint Film	TSH 1501G
Test Method for Adhesive Property of Paint Film	TSH 1503G
Test Method for Flexibility of Paint Film	TSH 1504G
Test Method for Water Resistance of Paint Film	TSH 1505G
Test Method for Volatile Solvent Resistance of Paint Film	TSH 1508G
Test Method for Chemical Resistance of Paint Film	TSH 1509G
Test Method for Gloss of Paint Film	TSH 1519G
Paint Performance, Rigid Substrates, Exterior	WSS-M2P180-A (Except 4.3)
Paint Performance, Flexible Substrates, Exterior	WSS-M2P181-A (Except 4.3)
Adhesion and Durability of Exterior Trims	GM9758P
Stone Chipping	GMW14700
Light Transmittance of Paint Film	TSH1520G
Specification for Paintable High Modulus Bumper Facia Material	0094Z-SJC-A210-M1; 0094Z-SJC-A22M2
Test Methods for Paints	JIS K 5400
Testing Methods for Paints- Mechanical Property, Scratch Hardness (Stylus Method)	JIS K 5600-5-5
Paint Film Quality of Plastic Parts and Chrome Plated Parts	NES M5081
<b>Peel Strength:</b>	
Peel of Stripping Strength of Adhesive Bonds	ASTM D903
Peel Adhesion of Pressure Sensitive Tapes	FLTM BU 112-02
90° Peel Test	FLTM BU-112-02
Peel Test	GM 3608M; GM 9838P
Cleavage Peel Test	GM 9797P
Determination of Peel Strength and Adhesion	LP 463TB-3-01
Peel Strength of Soft Trim Materials	SAE J1679

**Polyethylene Films:**

Polyethylene-Methods of Test ISO 7214

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**TEST****TEST METHOD**

Polyethylene Films	TSM 7500G
Testing Method for Polyethylene Foams	JIS K 6767
Polyethylene Films for Packaging	JIS Z 1702
<b>Reinforced Plastics:</b>	
Test Method for Ignition Loss of Cured Reinforced Resins	ASTM D2584
Glass Content of Reinforced Plastics Test for Curing With MEK	GM 9077P
Glass Fiber Reinforcement	GM 9509P
Mineral Filler Content	ISO 3451
Cure Test Using MEK	ISO 3451-1
Resin Content	LP 463PB-07-01
Material Properties of Plastic Material for Radiator Grilles	TI 134
Material Properties of Plastic Louver Cowl Top Ventilators	TSF3253G
Material Properties of Plastic Finish Panels of Instrument Cluster	TSF2256G
Standard Test Methods for Plastic Molding Materials	TSM0501G
Standard Test Methods for Plastic Molding Materials for Compliance with ISO	TSM0506G
Polypropylene Resin Molding Materials	TSM5514G
Material Properties for Plastic Engine Under Cover	TSM5518G
Material Properties for Plastic Parts	TSM5518G
Polyethylene Resin Molding Material	TSM5518G
Material Properties for Plastic Assist Grips	TSM5518G
Composite Reinforced Polypropylene Molding Materials	TSM5601G
Material Properties of Mud Guards	TSM5608G
Super Olefin Polymer Molding Materials (TSOP)	TSM5608G
<b>Rubber:</b>	
Test Method for Initial Tear Resistance of Plastic Film and Sheeting	ASTM D1004
Rubber Insulating Line Hose Specification for:	ASTM D1050
Test Method for Rubber - Compression Set at Low Temperatures	ASTM D1229
Test Method for Rubber Property-Durometer Hardness	ASTM D2240
Infrared Spectrophotometry Rubber-Identification by Rubber Hose Standard Test Method for	ASTM D3677
Test Methods for Rubber Property Compression Set	ASTM D380
Rubber Properties In Tension Test Methods for	ASTM D395
Test Method for Rubber Property Effect of Liquids	ASTM D412
Rubber Deterioration-Surface Cracking Test Method for	ASTM D471
Rubber Deterioration in Air Oven Test Method for	ASTM D518
Rubber Properties in Compression	ASTM D573
Test Method for Rubber Property - Tear Resistance	ASTM D575
General Techniques for Infrared Quantitative Analysis	ASTM D624
Trapezoid Tear Strength	ASTM E168
Tear Characteristics of Vacuum Forming Material	FLTM BN 022-01
	GM 9168P

**TEST**

Determination of Tear Strength  
Rubber, Vulcanized - Determination of Low-  
Temperature Brittleness  
Physical testing methods for Vulcanized Rubber  
Tear Resistance-Cellular Elastomeric Materials

**Salt Spray Testing:**

Method of Salt Spray (Fog) Testing  
Salt Spray Exposure  
Simulated Corrosion Lifetime - Salt Spray  
Exterior Lighting DVM - Salt Spray  
Salt Spray Resistance for Painted Panels and Parts  
Salt Spray (Mist) Test  
Test Ka: Salt Mis  
Test Kb: Salt Mist, Cyclic (Sodium Chloride Solution)  
Salt Spray Resistance to  
Salt Spray Test  
Salt Spray (Corrosion)  
Salt Fog  
Salt Spray Testing  
Test Method of Salt Spray  
Salt Spray Exposure

**Scratch, Scuff & Mar Resistance:**

Exterior Paint System - Mar & Scratch  
Mar Resistance for Exterior Part  
Scratch Resistance for Exterior Paint  
Five Finger Scratch Resistance  
Resistance to Scratching  
Scratch Resistance - 5 Finger Scratch Test  
Scratch Resistance  
Scratch and Mar Resistance of Plastics, Five Arm Test  
Mar and Scuff Resistance - 5 Finger Scratch Tester  
Crock Mar Resistance  
Cut Through Resistance  
Resistance to Scuffing  
Scratch Test Pencil  
Nail Scratch Resistance  
Marr & Scuff  
Resistance to Scratching and Mar  
Scratch Resistance  
Testing Method of the Scratch Resistance of Interior  
Polypropylene Resin Parts

**Seals:**

Seal Quality Acid Dissolution Test  
Sealability of Gasket Materials  
Plastic, Cellular, Molded PU High Resilience Seal  
Applications

**TEST METHOD**

ISO 8067  
  
ISO 812  
JIS K6301  
LP 463AB-7-02

ASTM B117  
DVM -0002-BM  
DVM-0002  
DVM-0014-EX  
FLTM BI 103-01  
GM 4298P  
IEC 68-2-11  
IEC 68-2-52  
JIS Z2371  
LP 416H-45; LP 463PB-10-01  
MIL-STD202F-101D  
MIL-STD-810F-509.4  
NES M0140  
TSH 1552G  
ISO 9227

DVM-0034 PA; DVM -0035 PA  
DVM-0034-PA  
DVM-0035-PA  
FLTM BN 108-03  
FLTM BN 108-13  
FLTM BN 108-13  
FLTM-108-13  
GM N 3943  
LP 463DD-18-01  
LP 463PB-54-01  
SAE J1128  
SAE J365  
TSH 1539G  
TSH 1544G  
GMW14130  
GMW14688  
8350Z-SDA-9000  
  
NES M M0159

ASTM B680  
ASTM F37  
  
MS-DC634

**TEST****TEST METHOD****Stain Resistance:**

Stain Resistance - Road Asphalt	27881-SDS
Stain Resistance	ASTM 9214P
Staining of Surfaces (Contact, Migration and Diffusion)	ASTM D925
Exterior Paint System Fluid Resistance	DVM 0037-PA
Road Asphalt Stain Resistance	DVM-27881
Stain & Mildew Resistance	ESB-M17H158-A
Bleeding, Respiration	FLTM AN 101-01
Water and Soap Spotting Test for Paint	FLTM BI 113-01
Resistance to Acid Spotting	FLTM BI 113-02
Synthetic Perspiration Resistance to	FLTM BI 113-03
Soiling and Cleanability for Interior Trim Material	FLTM BN 112-08
Determination of Fuel Resistance of Plastic Parts	FLTM BO 101-05
Staining of Surface by Polymers and Elastomers	FLTM BP 153-01
Hydrogen Sulfide Staining Resistance	GM 9069P
Water Spotting	GM 9133P
Staining Resistance	GM 9172P
Staining Test	GM 9689P
Sulfide Staining Resistance to	GM 9736P
Resistance to Sunscreen	GM N 10033
Soil and Cleaner resistance of Automotive Materials	GM W 3402
Staining of Soft Trim Materials	LP 463CB-14-01
Resistance to Water Spotting	LP 463KC-03-01B
Soil Resistance	LP 463KC-04-01-A
Contact Staining	MS-DC-648
Clouding Test	NES M7083
Suntan Lotion Resistance	TM-GEN-022B
Compatibility	GMW14069
Resistance to Sunscreen Lotion and Insect Repellent	GMW14445
Grease Staining Resistance for Interior Parts Paint	TSH1562G
<b>Tensile:</b>	
Elongation grab Method	ASTM 5034
Tensile Strength	ASTM D1117; ASTM D5733; JIS K6301
Tensile Properties of Plastics by Use of Microtensile Specimens	ASTM D1708
Tensile-Impact Energy to Break Plastics and Electrical Insulating Material	ASTM D1822
Tear Strength	ASTM D2261
Tensile, Compression, and Flexural Creep and Creep-Rupture of Plastics	ASTM D2990
Breaking Strength	ASTM D5034
Test Method for Tensile Properties of Plastics	ASTM D638
Test Methods for Tensile Properties of Thin Plastic Sheeting	ASTM D882
Tension Testing of Nonmetallic Gasket Materials	ASTM F152
Tensile Adhesion, Pluck Test	DVM -18401
Determination of Tensile Strength and Elongation at Break	ISO 1798
Determination of Tensile Properties of Rigid Materials	ISO 1926

**TEST****TEST METHOD**

Plastics - Determination of Tensile Properties	ISO 527-1/2
Determination of Tensile Properties	ISO R527
Rubber, Vulcanized or Thermoplastic - Determination of Tensile Stress - Strain Properties	JIS K6251
Rubber, Vulcanized or Thermoplastic - Determination of Tear Strength	JIS K6252
Tensile-Shear Adhesion	LP 463CB-8-01
Tensile Shear Adhesion of Sealers	LP 463NB-17-01
Determination of Tensile Strength	LP 463TB-4-01
Passive Sphere Tension Test	TP-10110
Tensile Properties	ISO 37
Tensile Properties	GMW3335M
Test Pieces for Tensile Test for Metallic Materials	JIS Z 2201
Method of Tensile Test for Metallic Materials	JIS Z 2241

**Thermal Testing:**

Thermal Oxidative Stability of Propylene Plastics, Using a Biaxial Rotator	ASTM D3012
Coefficient of Linear Thermal Expansion	ASTM D696
Performance (Thermal Cycling) for Plastic Parts	DVM-0004-RG
Thermocycle	DVM-0004-RG v5
Thermal Shock	DVM-0019-OR; FLTM BI 107-05; GM 4497M; GM 9525P; MIL-STD202-107; MIL-STD-883E-10119
Thermal Cycling	DVM-004-RG
Thermal Insulation Performance	GM 9202P
Ice Freeze Resistance	LP 463AB-53-01
High Temperature Test	MIL STD 810F-501.4
Low Temperature Test	MIL STD 810F-502.4; MIL-STD-810E-502.3
Temperature Cycling	MIL-STD-883E-1010.7
Thermal Cycle Test Method for Plastic Parts	NES M0132
Short Term Heat, Humidity and Cold	WSS-M2P188-A1 3.6.8.2
Low Temperature Testing Methods for Rubber, Vulcanized or Thermoplastic	JIS K 6261
Methods of High Temperature Test for Passenger Compartment Synthetic Resin Parts	NES M0131
Heat Cycle Test for Exterior Parts	0096Z-SYP-0000

**Vibration:**

Vibration	65840NDS00; ANSI C136.31-2001; ES-6L2T-14540-AB, 5.55; MIL-STD-202-201; MIL-STD-810E; MIL-STD-810F-514.5
Vibration Durability	7412Z-S9V-A010-M1
Vibration Testing	Bellcore GR-63-CORE; PF-10817; PF-8684
Air Register Movement Under Vibration	DVM 0001-IP
Air Register Movement Under Vibration	DVM 0019-IP
Vibration, BSR	DWG MA851317 (Mitsubishi)
Vibration Test	ES000003970-02
Intier Closure Specification - Vibration Test	ICS 000005173
Test Fd: Random Vibration Wide Band -Reproducibility High	IEC 68-2-34

**TEST****TEST METHOD**

Test Fc: Vibration (Sinusoidal)	IEC 68-2-6
Test Fh: Vibration, Broadband Random (Digital Control) and Guidance	IEC 68-2-64
Vibration Endurance	JIS D1601
Acoustic Noise	MIL-STD-810F-515.5
Shock	MIL-STD-810F-516.5
Instrument Panel Component & System Buzz, Squeak, and Rattle/Vibration Requirements	PF-8243
Intier Specified Vibration Testing	Z10270 G00; Z10296-E00
Intier Closure Specification - Vibration Test	Z10365-C00; Z10450; Z10463
Random Vibration	ASTM D4728-06
Sine Sweep Vibration	MIL-STD-202G-201A
Vibration & Shock	IEC 61373
<b>Viscosity:</b>	
Viscosity of Plasticsols and Organosols at Low Shear Rates by Brookfield Viscometer	ASTM D1824
<b>Water Immersion &amp; Absorption:</b>	
Water Absorption	ASTM C272
Water Absorption of Rigid Cellular Plastics	ASTM D2842
Water Resistance Using Controlled Condensation	ASTM D4585
Water Absorption of Plastics	ASTM D570
Water Immersion	ASTM D870
Light and Water Exposure of Nonmetallic Materials	ASTM G53
Condensing Water Vapor Test	FLTM BI 1104-02
Water Immersion Test for Painted Panels and Parts	FLTM BI 160-01
Protection Against Water	IEC 60592
Determination of Water Absorption	ISO 2896
Water Immersion Test for Painted Panels	LP 463PB-45-01
Moisture Resistance	MIL-STD-202F-106; MIL-STD-883E-1004
Water Ingress	BS EN 60529, Sect. 14.2.1, IPX1
Water Ingress	BS EN 60529, Sect. 14.2.2, IPX2
<b>Metallic Ores and Products (All Forms, Articles of Metal):</b>	
Method for Evaluating the Microstructure of Graphite in Iron Castings	ASTM A247
Test Methods and Definitions for Mechanical Testing of Steel Products	ASTM A370
Guide for defining and Rating the Microstructure of High Carbon Bearing Steels	ASTM A892
Test Method for Weight of Coating of Zinc Coated Galvanized Iron and Steel Articles	ASTM A90
Standard Test Method for High Speed Puncture	
Properties of Plastics Using Load and Displacement	ASTM D3763-02
Test Method for Estimating the Depth of Decarburization of Steel Specimens	ASTM E1077
Methods for Determining Average Grain Size	ASTM E112
Test Methods for Rockwell Hardness and Rockwell	ASTM E18

**TEST****TEST METHOD**

Superficial Hardness of Metallic Materials	
Practice for Determining the Inclusion Content of Steel	ASTM E45
Test Methods of Tension Testing of Metallic Materials	ASTM E8
Methods of Estimating the Largest Grain Observed in a Metallographic Section (ALA Grain Size)	ASTM E930
Chromate Conversion Coatings on Zinc, Cadmium, Aluminum-Zinc Alloys and Zinc-Aluminum Alloys Test Methods	ISO 3613
Methods for Measuring Decarburization in Ferrous Materials	LP 471A-2
Methods of Measuring Case Depth of Surface Hardened Steel and Iron	LP 471A-3
Estimating Average Grain Size of Materials	LP 471A-4
Hot-Rolled Carbon Steel Sheets and Strip	MES MM 100A
Cold-Rolled High Tensile Strength Steel Plates, Sheets and Strip	MES MM 106A
Grain Size	SAE J1268
Zinc-Composite Silicon-Based Resin Coating (Hexavalent Chrome-Free)	TSH7702G