SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY DETROIT - WARREN 11 MILE
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Warren, MI 48092
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CHEMICAL

Valid To: December 31, 2026 Certificate Number: 0098.14

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location above as well as the satellite laboratory location listed below to perform the following types of chemical tests and analysis on petroleum and petroleum products, plastics, rubbers, textiles, labels, gasket materials, metals, oxides, ceramics, paints, and paint products:

| Test Method | Test |
|---|---|
| **Ash** | |
| ISO 3451-1 (Method A) | Ash Content, General Method |
| ISO 3451-2 (Method A) | Ash Content, Polyalkylene Tera |
| ISO 3451-3 (Method A) | Ash Content, Cellulose Acetate |
| ISO 3451-4 (Method A) | Ash Content, Polymides |
| ISO 3451-5 (Method A) | Ash Content, PVC |
| ASTM D2584 | Ignition Loss of Cured Reinforced Resins |
| ASTM D5630 (Method B) | Ash Content of Thermoplastics |
| **Flammability** | |
| Chrysler MS JP 9-4 | Flammability |
| FLTM BN 024-02 | Automotive Materials, Flammability |
| FMVSS 571.302 | Flammability of Interior Materials |
| GB 8410 | Flammability of Automotive Interior Materials |
| GMW3232 | Flammability |
| HES C206 / HES D6003 | Flammability |
| ISO 3795 | Flammability |
| MES CF 050 | Flammability |
| NES M0094 | Flammability |
| SAE J369 | Automotive Materials, Flammability |
| Toyota TSM0500G | Flammability |
| VW TL1010 / DIN 75200 | Materials for Vehicle Interiors, Burning Behavior |
| Volvo VCS 5031,19 | Flammability of Interior Materials |



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| Test Method | Test |
|---|---|
| **Thermal Analysis** | |
| **Linear Thermal Expansion** | |
| ASTM D696 | Coefficient of Linear Thermal Expansion of Plastics Between (-30 and 30) °C |
| **Water Absorption** | |
| ASTM D570 | Water Absorption of Plastic |
| ISO 62 | Plastics-Determination of Water Absorption |

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Warren, MI 48091-1385

| Test(s): | Test Method(s): |
|---|---|
| Composition Analysis by Thermogravimetry (TGA) | ASTM E1131; ISO 11358 |
| Melting & Crystallization Temperature by Thermal Analysis (DSC) | ASTM E794, ASTM D3418, ASTM E1356, ASTM D3895, ASTM E1269;<br>GM 9094P (Inactive 2011)[2];<br>ISO 11357-1, -2, -3 |
| Formaldehyde by UV | PV3925; VDA 275; FLTM BZ 106-01A Bottle Test |
| pH of Aqueous Solutions with Glass Electrode | ASTM E70;<br>Chrysler LP-463KC-01-01A |
| Thermal Oxidative Stability of Propylene (Biaxial Rotator) | ASTM D3012;<br>GM9059P (Inactive)[2]; GMW14651 (Inactive)[2];<br>ISO 4577 |
| Transition Temperatures of Polymers by Thermal Analysis | ASTM D3418 |
| **Thermomechanical Analysis, TMA** | |
| ASTM E831 | Linear Thermal Expansion of Solid Materials by TMA |
| ASTM E1545 | Glass Transition Temperature by Thermomechanical Analysis |
| ISO 11359-1 | Thermomechanical Analysis, TMA, General Principles |
| ISO 11359-2 | Glass Transition Temp. and Coefficient of Thermal Expansion by TMA |

| Preparation | Method(s) | Associated Specifications |
|---|---|---|
| Bag | TSM 0508G; ISO 12219-2, ISO 12219-9 | GMW17914 A<br>TSM 0508G<br>NES M0402<br>MS300-55<br>01.12-L-10661<br>BZ 108-01<br>DWG 0094Z SNA 0000<br>TSM0512G<br>MES CF 080<br>DWG 0094Z-T7S-0000<br>CS-A0229<br>RTS-1745<br>TP-001008<br>E1805159<br>RNES B-001114 |

| Preparation | Method(s) | Associated Specifications |
|---|---|---|
| Micro-Scale Chamber | ISO-12219-3; ASTM D7706, ASTM D5116 | CS13398<br>TP001008<br>RNES-B-20116 V. 2.0<br>TP-0000912 |
| Chamber ($M^3$) | ISO 12219-4; ASTM D5116 | GMW17914 B<br>MS300-57<br>PV3492<br>GS97014-3<br>TS420-00-033<br>VCS 1027, 2769 |
| Chamber (50 L) | CAN/ULC-S774-09; ASTM D5116 | CAN/ULC-S774-09 |
| Bottle | GMW15635 | GMW15635<br>BZ 156-01<br>VDA 275 (UV)<br>VCS 1027, 2739 (UV)<br>BMW AA-0061 (UV) |
| Thermal Absorption | GMW15634 | GMS15634<br>VDA278 |
| Headspace | FLTM BZ 157.01 | FLTM BZ 157.01<br>PV3341<br>GMW8081<br>EN 13130-4<br>VCS 1027, 2749 and 2759<br>STD 429-003 |
| GC/MS VOC | ISO 16000-6; ASTM D6196 | GMW15654<br>PV3341<br>GMW8081<br>MES CF 080<br>DWG 0094Z SNA 0000<br>NES M0402<br>MS300-55<br>01.12-L-10661<br>GMW15634<br>VDA278<br>BZ 108-01<br>TSM 0508G<br>VCS 1027, 2749 and 2759<br>CS13398<br>TSM0512G<br>EN 13130-4 (1,3 – Butadiene)<br>GMW17914<br>FLTM BZ 157.01<br>DWG 0094Z-T7S-0000 |

| Preparation | Method(s) | Associated Specifications |
|---|---|---|
| GC/MS VOC (Cont.) | ISO 16000-6; ASTM D6196 | RNES-B-20116 V. 2.0<br>TS420-00-033<br>CS-A0229<br>VCS 1027, 2769<br>RTS-1745<br>TP-001008<br>E1805159<br>TP-0000912<br>STD 429-003<br>BSM 0508 |
| FID | GS97014-3 | GS97014-3 |
| HPLC | ISO 16000-3; ASTM D5197 | GMW15600<br>GMW15635<br>BZ 156-01<br>MS300-55<br>1.12-L-10661<br>BZ 108-01<br>TSM 0508G<br>MES CF 080<br>DWG 0094Z SNA 0000<br>GMW17914<br>NES M0402<br>TSM0512G<br>CS13398<br>DWG 0094Z-T7S-0000<br>RNES-B-20116 V. 2.0<br>TS420-00-033<br>CS-A0229<br>RTS-1745<br>VCS 1027, 2769<br>TP-001008<br>E1805159<br>TP-0000912 |
| GC/MS SVOC | GMW15634 | GMW15634<br>VDA278 |

[1]This accreditation covers the specified testing performed at the laboratory locations listed in this scope of accreditation.

[2]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.

# Accredited Laboratory

A2LA has accredited

## ELEMENT MATERIALS TECHNOLOGY DETROIT – WARREN 11 MILE

*Warren, MI*

for technical competence in the field of

## Chemical 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 26th day of February 2025.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0098.14
Valid to December 31, 2026

*For the types of tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.*