



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

ELEMENT MATERIALS TECHNOLOGY DETROIT – WARREN CONCEPT

1920 Concept Dr.

Warren, MI 48091-1385

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CHEMICAL

Valid To: March 31, 2019

Certificate Number: 2207.02

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

<u>Test(s):</u>	<u>Test Method(s):</u>
API Gravity/Density (Hydrometer Method)	ASTM D1298; IP 160; ISO 3675
Ash Content	ASTM D482; ISO 6245, 3451
Boron Carbide Analysis	ASTM C791
Carbon & Sulfur in Iron, Nickel, and Cobalt Alloys	ASTM E1019
Cloud Point of Petroleum Oils	ASTM D2500; IP 219; ISO 3015
Compatibility	GM9141P (Inactive 2017) <sup>1</sup>
Composition Analysis by Thermogravimetry (TGA)	ASTM E1131
Cone Penetration of Lubricating Grease	ASTM D217; IP 50
Cone Penetration of Lubricating Grease (1/4 & 1/2 Scale Cone)	ASTM D1403; IP 310; ISO 2137
Drop Melting Point of Petroleum Wax	ASTM D127; IP 133

**Test(s):****Test Method(s):**

Dropping Point

ASTM D566;  
IP 132;  
ISO 2176

Effects of Liquids (Rubber)

Mass Change

ASTM D471 (Section 11)

Volume Change

ASTM D471 (Section 12)

Dimensional Change

ASTM D471 (Section 13)

Mass Change (One Side Only)

ASTM D471 (Section 14)

Mass of Soluble Matter

ASTM D471 (Section 15)

Tensile, Elongation, Hardness

ASTM D471 (Section 16)

Failure Analysis

ASM Metals Handbook, Volume 11

Filler Content, Glass Content (%)

GM9077P (Inactive 2013)<sup>1</sup>

Flammability/Burning Rate

49 CFR 571.302 (FMVSS 302);  
ASTM D635;  
GM9070P (Inactive 2011)<sup>1</sup>; GMW 3232;  
ISO 3795;  
NES M0094;  
SAE J369;  
TSM 0500G;

Flash and Fire Points

Cleveland Open Cup

ASTM D92;  
IP 36;  
ISO 2592

Pensky Martens Closed Tester

ASTM D93;  
IP 34;  
ISO 2719

Gasoline Resistance

FLTM BO 101-05;  
HES D6501 (Section 3.21)

Infrared (FTIR) Spectroscopy

ASTM D3677, E204, E1252

Inductively Coupled Plasma (ICP-MS) Spectrometry

ASTM E2823

Kinematic Viscosity of Transparent &amp; Opaque Liquids

ASTM D445;  
IP 71

Melting &amp; Crystallization Temperature by Thermal Analysis (DSC)

ASTM E794

Moisture Content of Polyamide (Karl Fischer)

ASTM D6869

Optical Emission Vacuum Spectrometry (Fe, Ni, Cu, Al Alloy)

ASTM E327, E415, E1086, E1251, E1253

**Test(s):****Test Method(s):**

pH of Aqueous Solutions with Glass Electrode	ASTM E70; Chrysler LP-463KC-01-01A
Pour Point of Petroleum Oils	ASTM D97; IP 15; ISO 3016
Scanning Electron Microscopy (SEM) / (EDS)	ASTM E986, E1508
Thermal Expansion by TMA	ASTM E831
Thermal Oxidative Stability of Propylene (Biaxial Rotator)	ASTM D3012; GM9059P (Inactive 2012) <sup>1</sup> ; GMW 14651 (Inactive 2012) <sup>1</sup> ; ISO 4577
Transition Temperature by TMA	ASTM E1545
Transition Temperatures of Polymers by Thermal Analysis	ASTM D3418
Viscosity	ASTM D2196 (Method A), D4212; IP 267
Volatile Organic Compound (VOC) VOC Analysis by Gas Chromatography	ASTM D7706, D5116; CAN/ULC-S774-09; FLTM BZ 156-01, BZ 157-01; GMW 8081, 15634, 15635; Honda Dwg No. 00942-SNA-000; NES MO 402; PV 3341, 3925; Toyota TSM 05086; TPJLR.52.104; VDA 275, 277, 278
Water Absorption of Plastics	ASTM D570; ISO 62
Weight of Coating on Aluminum Coated Iron or Steel Articles	ASTM A428
Weight of Coating on Anodically Coated Aluminum	ASTM B137; GMW 16250
Weight of Coating on Zinc Coated Iron or Steel Articles	ASTM A90

<sup>1</sup>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 CONCEPT**

*Warren, MI*

for technical competence in the field of

## **Chemical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *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 8 January 2009).



Presented this 27<sup>th</sup> day of December 2018.

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

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 2207.01  
Valid to March 31, 2019  
Revised February 28, 2018

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