SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017[1]

IMR TEST LABS
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CHEMICAL

Valid to: April 30, 2024 Certificate Number: 1140.02

In recognition of the successful completion of the A2LA evaluation process (including compliance to R223 – Specific Requirements – GE Aviation S-400 Accreditation Program), accreditation is granted to this laboratory to perform the tests listed below on adhesives, aerospace and automotive products, aluminum alloys, brass & bronze, cables, carbon steel, cast iron, ceramics, coatings, copper alloys, elastomers, fasteners, labels, low alloy steel, nickel, magnesium, cobalt, composites, additive manufacturing parts, paints, plastics, powder metals, rubber, stainless steel, thermal spray, superalloys, titanium alloys, zinc alloys, oil and oil products, consumer products, children's products, toys, jewelry.

Test:	**Test Method(s):**
Ash Content	ASTM C561, D5630; ISO 3451-1
Chromatography	
Ion Chromatography	ASTM D4327
Cleanliness	ISO 16232
Coating Mass / Unit Area	ASTM B767
Coating Weight (Zn)	ASTM A90/A90M
Combustion Analysis – LECO (C, H, O, N, S)	ASTM E1019, E1409, E1447, E1569, E1941; CAP-032
Density, Oil Content, and Porosity	ASTM B962, B963; ISO 2738; MPIF 42, 57
Extractables (Gravimetric)	ASTM F2459; CAP-074
Moisture Analysis	CAP-087A
Total Organic Carbon	USP 643
Viscosity	ASTM D445, D2857

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Test:	**Test Method(s):**
Powder Characterization	
Laser Light Diffraction (Microtrac) - Particle Size	ASTM B821, B822, C1070
Sieve Analysis - Particle Size	ASTM B214; ISO 4497; MPIF 05
Hall Flow Rate / Apparent Density	ASTM B212, B213
Carney Flow Rate / Apparent Density	ASTM B964, B417
Tap Density	ASTM B527
Loose Bulk Density	ASTM D7481
Physical Properties	
Density/Specific Gravity	ASTM B311, D792 (Method A), D1475, D3575 (Suffix W, Method A); ISO 1183-1, 3369
Restriction of Hazardous Substances (RoHS)	CAP-065
Hexavalent Chromium	CAP-055
ICP – Inductively Coupled Plasma	CAP-017
Ion Chromatography	ASTM D4327; CAP-043
X-Ray Fluorescence (XRF)[2] (Semi-quantitative)	CAP-061, CAP-064
SEM/EDS (Semi-quantitative)	ASTM E1508
Spectroscopy	
FTIR	ASTM E334, E573, E1252
Inductively Coupled Plasma (ICP)	ASTM E3061, E2371, E2594, D1976; CAP-017
ICP-MS Analysis	CAP-079
Optical Emission (OES) Al, As, B, C, Co, Cr, Cu, Fe, Mn, Mo, Nb (Cb), Ni, P, Pb, S, Si, Sn, Ti, V, W, Zr Al, Bi, Cr, Cu, Fe, Mg, Mn, Ni, P, Pb, Si, Sn, Ti, Zn	ASTM A751, E415, E1086 ASTM E1251
Wavelength Dispersive (XRF)	ASTM E539; CAP-069
Positive Material Identification (PMI)[2]	CAP-064
X-Ray Fluorescence (XRF) Semi Quant.[2]	CAP-061
Thermal Analysis	
DSC (Differential Scanning Calorimeter)	ASTM D3418, D3895, D4591, D5028, E794, E1356
DMA (Dynamic Mechanical Properties)	ASTM D5023, D5024, D5026, D7028, E1640, E1867
TGA (Thermogravimetric Analyzer)	ASTM E1131, D6370
TMA (Thermal Mechanical Analyzer)	ASTM E831, E1545, E2092
Wet Chemistry	
Conductivity / Resistivity	ASTM D1125
pH	ASTM D1293, D2110, D2989, E70
Water Absorption	ASTM D570, D3575 (Suffix L)
Metal Powder Skeletal Density by Helium Pycnometry	ASTM B923

[1]This laboratory also meets the requirements of ISO/IEC 17025:2005.

[2]This laboratory performs field testing activities for these tests.

Accredited Laboratory

A2LA has accredited

IMR TEST LABS

Lansing, NY

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 laboratory also meets the requirements of R223 – Specific Requirements: GE Aviation S400 Accreditation Program. 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 7th day of April 2022.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1140.02
Valid to April 30, 2024

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