SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY DALEVILLE
9301 Innovation Dr., Suite 175
Daleville, IN 47334
Giada Ingram Phone: (317) 583-1848
E-mail: giada.ingram@element.com

CHEMICAL

Valid To: August 31, 2028 Certificate Number: 0174.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests focusing on but not limited to Aerospace Materials:

Test(s):	**Test Method(s):**
Spectroscopy	
ICP - (Ag, Al, Ar, As, Au, B, Ba, Be, Bi, C, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Hg, Ho, I, In, Ir, K, La, Li, Lu, Mg, Mn, Mo, N, Na, Nb, Nd, Ni, Os, P, Pb, Pd, Pr, Pt, Rb, Re, Rh, Ru, S, Sb, Sc, Se, Si, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr)	ASTM E1479, ASTM E2594, ASTM E2371, ASTM E3061, ASTM E3515, ASTM E1473, ASTM A751; CTP 3101[1, 2]
Atomic Absorption - Graphite Furnace (Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Ce, Cl, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Hg, Ho, In, Ir, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, Os, P, Pb, Pd, Pr, Pt, Rb, Re, Rh, Ru, S, Sb, Sc, Se, Si, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr)	ASTM E1184, ASTM A751, ASTM E1473; CTP 3096-2[2]
Optical Emission - (Al, As, B, Be, Bi, C, Cd, Ce, Co, Cr, Cu, Fe, Hf, Mg, Mn, Mo, N, Nb, Ni, P, Pb, S, Sb, Si, Sn, Ta, Te, Ti, V, W, Y, Zn, Zr)	ASTM E415, ASTM E1086, ASTM E1251, ASTM A751, ASTM E1473; CTP 3094[2]
X-ray Analysis - (Ag, Al, As, B, Ba, Be, Bi, Co, Cr, Cu, Fe, Ga, Hf, La, Mg, Mn, Mo, Nb, Ni, P, Pb, Rh, Ru, S, Si, Sn, Sr, Ta, Ti, V, W, Y, Zn, Zr)	ASTM E322, ASTM E539, ASTM E572, ASTM A751, ASTM E1085, ASTM E1621, ASTM E1473; CTP 3093[2]
Combustion / Inert Gas Fusion	
Combustion (LECO) (C, S)	ASTM E1019, ASTM E1941, ASTM A751, ASTM E1473; CTP 3098[2]

Unofficial If Printed

Test(s):	Test Method(s):
Inert Gas Analysis (LECO) (H, N, O)	ASTM E1019, ASTM E1409, ASTM E1447, ASTM A751, ASTM E1473; CTP 3097[2], CTP 3008-1[2]
Wet Chemistry	
Gravimetric	ASTM E478, ASTM E1473; CTP 3024[2]
Electrochemical Deposition	ASTM E53; CTP 3024[2]
Physical Properties	
Density	ASTM B311; CTP 3030-1[2]
Coating Weight	ASTM B137-95, ASTM A90/A90M; CTP 3068[2], CTP 3069[2]
Mercurous Nitrate	ASTM B154; PTP 1044[2]

[1]This standard is a specification and is used to support the ICP test methods on the Lab's scope.

[2]In-House Test Method.

Uncontrolled If Printed

Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY DALEVILLE

Daleville, IN

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 29th day of July 2026.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0174.01
Valid to August 31, 2028

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

Uncontrolled if printed

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY DALEVILLE
9301 Innovation Dr., Suite 175
Daleville, IN 47334
Giada Ingram Phone: (317) 583-1848
E-mail: giada.ingram@element.com

MECHANICAL

Valid To: August 31, 2028 Certificate Number: 0174.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests focusing on but not limited to Aerospace Materials:

Test(s):	**Test Method(s):**
Physical Properties:	
Bend	ASTM A370, ASTM E290, ASTM E190
Coating and Plating Adhesion	ASTM B571 (Less Sec. 6 & 10), ASTM C633, ASTM E290, ASTM F1147, ASTM D3359; Federal Test Method Standard 141, Method "Adhesion (Wet) Tape Test"
Creep, Stress Rupture (200 - 2010) °F	ASTM E139, ASTM E292
End Quench Hardenability - Jominy	ASTM A255; SAE J406
Hardness Testing	
Rockwell (A, B, C, E, F)	ASTM A370, ASTM E18; Bell Helicopter BPS 4467
Rockwell Superficial (15N, 30N, 45N, 15T, 30T, 45T)	ASTM A370, ASTM E18; Bell Helicopter BPS 4467
Brinell Hardness (500, 1000, 3000 Kg)	ASTM A370, ASTM E10
Microhardness	
Vickers (50, 100, 200, 300, 500, 1000g)	ASTM B578, ASTM E92, ASTM E384; NASM 1312-6; ISO 6507-1
Knoop (25, 50, 100, 200, 300, 500, 1000g)	ASTM B578, ASTM E92, ASTM E384; NASM 1312-6; ISO 6507-1
Hydrogen Embrittlement	ASTM F519
Impact Testing	
Charpy Impact (-150 - 100) °F	ASTM A370, ASTM A923, ASTM E23
Izod Impact (Room Temperature)	ASTM E23

Uncontrolled If Printed

Test(s):	Test Method(s):
Physical Properties (cont):	
Tension/ Tensile	
Elevated Temperature Tension / Tensile (150 - 2010) °F	ASTM E21; ISO 6892-2; EN 2002-2
Tensile (60K max)	ASTM A370, ASTM B557/B557M, ASTM E8/E8M, ASTM E345, ASTM F1147; ISO 6892-1; EN 2002-1
Specimen Conditioning (Heat Treat) (-150 - 2150) °F	MTP 2070[1]
Shear Test	AWS B4.0; AWS D17.2/D17.2M
Metallographic Evaluations:	
Alpha Case	PTP 1007[1]; GEAE P3TF19; P3TF32; PW MCLM E142
Bond Integrity / Oxide Content / Cracking	PTP 1060[1]; GEPG P16B-AG11; PW MCLM E53
Case Depth	ARP 1820; SAE J423
Coating / Plating Thickness	ASTM B487; ASTM B748
Corrosion and Exfoliation Corrosion Susceptibility	ASTM A262 (Practice A, E); ASTM A763 (Practice W); ASTM A923; ASTM G28 (Method A); ASTM G34; ASTM G110; ASTM F2111; PTP 1048[1]; PTP 1026[1]
Depth of Decarburization	AMS-H-6875; ASTM E1077, ASTM F2328; SAE J419
Electrical Conductivity by Eddy Current	ASTM E1004
Grain Size	ASTM E112, ASTM E883, ASTM E930, ASTM E1181
Image Analysis (Second Phase Analysis)	ASTM E1245; SAE AMS 2315; PTP 1009[1]
Inclusion Content	ASTM E45; SAE J422
Macroetching	ASTM A604, ASTM E340, ASTM E381
Microetching	ASTM E407

Uncontrolled if Printed

Test(s):	**Test Method(s):**
Metallographic Evaluations (cont):	
Microstructure Evaluation	ASM Metals Handbook (Volume 7, 8th Edition); NAS 4002, 4004; PTP 1010[1]; FTP 4004[1]
Preparation	ASTM E3
pH of Aqueous Solutions	ASTM E70
Recast / Re-melt	PTP 1049[1]
Surface Finish	SAE J448; ASME B46.1
Visual / Microscopic Metallurgy	GE P3TF3l; PTP 1055[1]
SEM / EDS	ASTM B748, ASTM E1508
Failure Analysis	ASM Handbook Volumes 11 and 12
Thermoelectric Sorting of Conductive Materials	ASTM E977
Welder Certification / Weld Procedure Testing	Using the methods listed above in accordance with: ASME Section IX; AWS: AWS B2.1/B2.1M, AWS B4.0, D1.1/D1.1M, D1.2/D1.2M, D1.3/D1.3M, D1.5/D1.5M, D1.6/D1.6M, D9.1/D9.1M, D10.9/D10.9M, D17.1/D17.1M, D17.2/D17.2M, D20.1/D20.1M MIL-STD-248D (Withdrawn 1997); NAVSEA S 9074-AQ-GIB-010/248
Environmental Simulation:	
Salt Spray	ASTM B117, D1654; NASM 1312-1; GM4298P (Superseded 2010)
Humidity	ASTM D2247
Water Fog Test	ASTM D1735

[1]In-House Test Method.

Uncontrolled if Printed

Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY DALEVILLE

Daleville, IN

for technical competence in the field of

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 29th day of July 2026.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0174.02
Valid to August 31, 2028

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

Uncontrolled if printed