



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY NEW BERLIN INC.

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MECHANICAL

Valid To: August 31, 2028

Certificate Number: 0098.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform physical tests, welding qualification tests, investigative nondestructive testing, metallography and microscopy on metallic and non-metallic materials (including plastics, composites and rubber) and to perform laboratory corrosion and environmental exposure tests on metals, alloys, plastics, composites and rubber, fabricated assemblies or parts, tape and various coatings, using the following types of tests:

| Test Technology                                    | Scale Range | Test Method(s) | Third Party Documents                     |
|----------------------------------------------------|-------------|----------------|-------------------------------------------|
| <b><u>Physical Testing</u></b>                     |             |                |                                           |
| Adhesive Bond Strength                             |             | PM-08          | ASTM D1002, D3163, D3165, D5868           |
| Axial Tensile and Proof                            |             | MT-01          | ASTM F606/F606M;<br>SAE J429, J995, J1199 |
| Charpy Impact                                      |             | MT-07          | ASTM A370, E23; ISO 148-1                 |
| Coefficient of Friction                            |             | PM10           | ASTM D1894-14                             |
| Compression and Flexural Properties                |             | PM-07          | ASTM D575, D695, D790                     |
| Compression Set                                    |             | PM-07          | ASTM D395 (Method B)                      |
| Rubber O Ring<br>(Except Shrinkage)                |             | PM-16          | ASTM D1414                                |
| Rubber Tear Strength (Except<br>CP Sample Cutting) |             | PM-04          | ASTM D624                                 |
| Strain Gaging <sup>1</sup>                         |             | AM-04          | ASTM E1237                                |
| <b><u>Fatigue Testing</u></b>                      |             |                |                                           |
| Component Fatigue                                  |             | AM-03          | ASTM E466                                 |

| Test Technology                                                     | Scale Range                                           | Test Method(s) | Third Party Documents                                                                           |
|---------------------------------------------------------------------|-------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------|
| <b><u>Hardness Testing</u></b>                                      |                                                       |                |                                                                                                 |
| Brinell                                                             | 500 & 3000 kg                                         | MT-03          | ASTM E10                                                                                        |
| Rockwell                                                            | A, BW, C, EW, 15N, 30N, 45N, 15TW, 30TW, 45TW, MW, RW | MT-02          | ASTM D785, E18, F606/F606M; SAE J429, J995                                                      |
| <b><u>Impact Testing</u></b>                                        |                                                       |                |                                                                                                 |
| Izod Impact                                                         |                                                       | PM-14          | ASTM D256 (Methods A, C, D, E)                                                                  |
| Unnotched Impact                                                    |                                                       | PM-14          | ASTM D4812                                                                                      |
| <b><u>Microhardness</u></b>                                         |                                                       |                |                                                                                                 |
| Knoop                                                               | 100, 200, 300, 500g                                   | MT-09          | ASTM B578, E384; ISO 9015-2, 6507-1                                                             |
| Vickers                                                             | 100, 200, 300, 500g                                   | MT-09          | ASTM B578, E384; ISO 9015-2                                                                     |
| MacroVickers                                                        | 5, 10, 30 kg                                          | MT-09          | ASTM E92, E384; ISO 6507-1                                                                      |
| Durometer                                                           | Shore A & D & M                                       | PM-06          | ASTM D2240                                                                                      |
| <b><u>Tension Testing</u></b>                                       |                                                       |                |                                                                                                 |
| Metals                                                              | 120,000 lbs. Max.                                     |                | ASTM A370, B557, B557M, E8/E8M; ISO 6892-1                                                      |
| Plastics & Polymers                                                 | 120,000 lbs. Max.                                     | PM-01, PM-11   | ASTM D638, D882, D1004                                                                          |
| Rubber                                                              | 120,000 lbs. Max.                                     | PM-05          | ASTM D412                                                                                       |
| <b><u>Metallography</u></b>                                         |                                                       |                |                                                                                                 |
| Preparation of Samples <sup>1</sup>                                 |                                                       | MA-08          | ASTM E3                                                                                         |
| Microstructure <sup>1</sup>                                         |                                                       | MA-08          | ASTM A247                                                                                       |
| Inclusion Content                                                   |                                                       | MA-08          | ASTM E45 (Method A, B, D)                                                                       |
| Grain Size <sup>1</sup>                                             |                                                       | MA-08          | ASTM E112, E883                                                                                 |
| Macroetching <sup>1</sup>                                           |                                                       | MA-08          | ASTM E340, E381                                                                                 |
| Microetching <sup>1</sup>                                           |                                                       | MA-08          | ASTM E407                                                                                       |
| Depth of Decarburization                                            |                                                       | MA-08          | ASTM E1077, E883, F2328, F2328M; ISO 898-1; SAE J121 (Superseded 2013), J121M (Superseded 2013) |
| Case Depth                                                          |                                                       | MA-11          | SAE J423                                                                                        |
| Coating Thickness                                                   |                                                       | MA-09          | ASTM B244, B487, B499, D1005, D1186 (Withdrawn 2006), D7091; ISO 1463, 2808, ASTM B748          |
| Scanning Electron Microscopy (SEM) (Fracture Mode Characterization) |                                                       | MA-14          |                                                                                                 |

| Test Technology                               | Scale Range | Test Method(s) | Third Party Documents                                                                                            |
|-----------------------------------------------|-------------|----------------|------------------------------------------------------------------------------------------------------------------|
| <b><u>Corrosion Tests</u></b>                 |             |                |                                                                                                                  |
| Accelerated Weathering<br>Fluorescent (QUV)   |             | PC-13          | ASTM G147, G151, G154, D4329,<br>D4587, D4674, D5208; SAE J2020                                                  |
| Xenon Arc                                     |             | PC-13          | ASTM D2565, D4355, D4459,<br>D5071, D6551, D6695, D7869,<br>G155; GM9327P (Superseded 2012);<br>SAE J2412, J2527 |
| Corrosion Resistance:                         |             |                |                                                                                                                  |
| Susceptibility,<br>Dezincification Resistance |             | RR-04          | ISO 6509-1                                                                                                       |
| Intergranular Corrosion<br>Resistance         |             | RR-05          | ASTM A262 (Practice A &<br>E), A763, G28, G67                                                                    |
| Environmental Compatibility:                  |             |                |                                                                                                                  |
| Humidity                                      |             | RC-02          | ASTM D1735, D2247, D4585,<br>A967/A967M (Practice B);<br>GMW14729                                                |
| Salt Spray (Fog)                              |             | RC-01          | ASTM B117, A967/A967M<br>(Practice C); ISO 9227                                                                  |
| Modified Salt Spray (Fog)                     |             | RC-01          | ASTM G85 (A1, A2, A3, A5);<br>ISO 9227                                                                           |
| Cyclic Corrosion                              |             | RC-03          | ASTM D5894, G85 (A2, A3, A5);<br>GM9540P (Superseded 2012);<br>GM9505P (Superseded 2012);<br>GMW14872; SAE J2334 |
| Post-Exposure Evaluations:                    |             |                |                                                                                                                  |
| Rusting                                       |             | RC-05          | ASTM D610                                                                                                        |
| Blistering                                    |             | RC-05          | ASTM D714                                                                                                        |
| Scribed/Non-Scribed                           |             | RC-05          | ASTM D1654                                                                                                       |
| <b><u>Coating Evaluation</u></b>              |             |                |                                                                                                                  |
| Coating Adhesion:                             |             |                |                                                                                                                  |
| Paint & Plastic                               |             | PC-01          | ASTM D3359;<br>Ford FLTM BI 106-01;<br>GM9071P (Superseded 2012)                                                 |
| Plating                                       |             |                | ASTM B571                                                                                                        |
| Pull-off Strength                             |             | PC-04          | ASTM D4541                                                                                                       |
| Coating Flexibility:                          |             |                |                                                                                                                  |
| T-Bend                                        |             | PC-09          | ASTM D4145                                                                                                       |
| Coating Impact                                |             | PC-10          | ASTM D2794                                                                                                       |
| Conditioning of Plastics                      |             | PM-01          | ASTM D618                                                                                                        |
| Chip Resistance<br>(Gravelometer)             |             |                | ASTM D3170; GMW14700;<br>GM9508P (Superseded 2010);<br>SAE J400                                                  |
| Gloss                                         |             | PC-05          | ASTM D523, D2457                                                                                                 |
| Pencil Hardness                               |             | PC-02          | ASTM D3363                                                                                                       |
| Taber Abrasion Resistance                     |             | PC-03          | ASTM D3389, D4060, D6037;<br>GM9515P (Cancelled 2013);<br>ISO 9352                                               |

| Test Technology                                                                            | Scale Range | Test Method(s) | Third Party Documents                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------|-------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Welding and Brazing Performance (Operator) and Procedure Qualification Tests</u></b> |             |                |                                                                                                                                                                                                                                                                                   |
| Bend                                                                                       |             |                | ASTM E290, API STD 1104; AWS B2.1, B2.2, B4.0, D1.1, D1.2, D1.5, D3.6M, D14.1, D14.3, D14.4, D14.5, D14.6, D17.1/17.1M, D18.1; ASME Sec. IX; ISO 5173, 9606-1, 9606-2, 15614-1, 15614-12, 15614-13, 15614-2; MIL-STD-248D (Superseded 1997); NAVSEA S9074-AQ-GIB-010/248          |
| Break<br>(Fillet Weld)                                                                     |             |                | API STD 1104; ASME Sec. IX; AWS B4.0, D1.1, D1.2, D3.6M, D14.1, D14.3, D14.4, D14.5, D14.6, D17.1/17.1M; ISO 9606-1, 9606-2; MIL-STD-248D (Superseded 1997); NAVSEA S9074-AQ-GIB-010/248                                                                                          |
| Hardness                                                                                   |             |                | API STD 1104; AWS B4.0, D3.6M, D8.9M, D14.3; BS EN ISO 14271, 15614-1, 15614-12; MIL-STD-248D (Superseded 1997); NAVSEA S9074-AQ-GIB-010/248                                                                                                                                      |
| Impact                                                                                     |             |                | AASHTO/AWS D1.5, D14.1, D14.6; ASME Sec. IX; AWS D1.1, D3.6M, D17.1/17.1M; BS EN ISO 9016; DIN EN 1992-1-1/NA; MIL-STD-248D (Superseded 1997); NAVSEA S9074-AQ-GIB-010/248                                                                                                        |
| Macroetch                                                                                  |             |                | ANSI/AASHTO/AWS D1.5; ANSI/AWS D1.2, D1.4, D14.1, D14.4, D14.5, D14.6, D15.1; API STD 1104; ASME Sec. IX; AWS B2.1, B2.2, D1.1, D3.6M, D14.3, D17.1/D17.1M; BS EN ISO 15614-1; DIN EN ISO 17639; ISO 9606-1, 15614-2; MIL-STD-248D (Superseded 1997); NAVSEA S9074-AQ-GIB-010/248 |
| Metallographic                                                                             |             |                | ASME Sec. IX; AWS D1.1, D8.9M, D17.1/D17.1M, D17.2/17.2M; BS EN ISO 15614-1, 15614-2, 15614-12; DIN EN ISO 17639                                                                                                                                                                  |
| Shear                                                                                      |             |                | AWS B2.1, B2.2, B3.6M, B4.0, D8.9M, D17.2/17.2M; ASME Sec. IX; EN ISO 14273; ANSI/AWS C3.2, D1.2, D1.3                                                                                                                                                                            |

| Test Technology                                                                                  | Scale Range | Test Method(s) | Third Party Documents                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------|-------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Welding and Brazing Performance (Operator) and Procedure Qualification Tests Cont.</u></b> |             |                |                                                                                                                                                                                                                                                                                                               |
| Tensile                                                                                          |             | MT-01          | ANSI/AASHTO/AWS D1.5; ANSI/AWS D1.4, D14.1, D14.4, D14.5, D14.6, D15.1; API STD 1104; ASME Sec. IX; ASTM A488; AWS B2.1, B2.2, B4.0, D1.1, D3.6M, D8.9M, D14.3, D17.1/D17.1M, D18.1; DIN EN ISO 8496; ISO 1002, 4136, 15614-1, 15614-2, 15614-12; MIL-STD-248D (Superseded 1997); NAVSEA S9074-AQ-GIB-010/248 |
| Peel & Chisel                                                                                    |             |                | ISO 10447                                                                                                                                                                                                                                                                                                     |
| <b><u>Miscellaneous Testing</u></b>                                                              |             |                |                                                                                                                                                                                                                                                                                                               |
| Failure Analysis                                                                                 |             |                | Using the methods listed above in accordance with ASM Handbook Volume 11 and Volume 11B.                                                                                                                                                                                                                      |

<sup>1</sup> This laboratory performs field testing.



# Accredited Laboratory

A2LA has accredited

## ELEMENT MATERIALS TECHNOLOGY NEW BERLIN INC.

New Berlin, WI

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 18<sup>th</sup> day of September 2026.

A blue ink signature of Mr. Trace McInturff.

Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 0098.02  
Valid to August 31, 2028

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