

TITLE OF SECTION –

Element Materials Technology Plzen – List of Uncertainty Budgets for Accredited Methods

This document is supplemental to Element’s Statement of Conformity Policy. The below table contains indicative uncertainty values for the test types included in Element Plzen schedule of accreditation. Uncertainty budgets at time of test may differ from the values reported in this document due to dependency on test specific parameters or changes in specimen geometry, equipment calibration, qualified staff and other contributing factors. For this reason, the values shown below should be seen as indicative rather than precise. Budgets for specific test results can be made available upon request if these are required to understand the actual risk when the statement of conformity is made.

Type of test	Test methods	Parameter	Urcentainity Value
Tensile test at ambient temperature	ME-M01-1 (ASTM A370, ASTM B557, ASTM E8/E8M, BS 4A4 - Part 1:Section 1, BS EN ISO 6892-1, EN 2002-1, MSRR 9922 (2017), RRMS 30020) ASTM E8/E8M ASTM A370, čl. zk. tahem BS 4A4 Part 1 Section 1:1966 BS EN 2002-1 BS EN 10002-1:2001 BS EN ISO 6892-1 ASTM B557	uts-lower yield 0.2%PS 0.5%Strain RoA	1,38% 2,94% 6,81% 3,56%
Tensile test elevated temperature	ME-M01-2 (ASTM A370, ASTM B557, ASTM E21, EN 2002-2, BS 4A4 - Part 1: Section 2, BS EN ISO 6892 – Part 2.1.7, MSRR 9922 (2017), RRMS 30020) ASTM E21 ASTM A370, čl. zk. tahem BS 4A4 Part 1 Section 2:1967 BS EN 2002-2 BS EN 10002-5:1992 BS EN ISO 6892-2		Dependant on material type and test temperature. Contact laboratory for details
Tensile test at low temperature	ME-M01-0 Appendix F BS EN ISO 6892-3		Dependant on material type and test temperature.

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			Contact laboratory for details
Uniaxial creep test in tension	EL-AE-OP-MEC-PL-MD27093 (BS 4A4: Part 1 Section 3, ASTM E139, ASTM E292, BS EN 2002-005, BS EN ISO 204, MTL 120-3, MTL 144-3) ASTM E139 BS 4A4: Part 1 Section 3:1967 BS EN 2002-005, čl. 17 BS EN 10291:2000 BS EN ISO 204	UoM Rupture	21% on life
		UoM Rupture	24%
		Elongation	1,6%
		RoA	4,7%
Stress rupture test	EL-AE-OP-MEC-PL-MD27087 (ASTM E139, ASTM E292, BS 4A4: Part 1 Section 3:1967, BS EN 2002-005, čl. 16, BS EN ISO 204) ASTM E139 ASTM E292 ASTM F519 BS 4A4: Part 1 Section 3:1967 BS EN 2002-005, čl. 16 BS EN 10291:2000 BS EN ISO 204	UoM Rupture Strain	21% on Life 0,05% Strain
Brinell Hardness test	EX-AE-OP-MEC-PL-MD27080 (BS EN ISO 6506-1, BS EN ISO 6506-2, ASTM E10) ASTM E10 BS EN ISO 6506-1		±8,1HBW
Rockwell hardness test	E-E-OP-AS-ME-PL-MD001 (ASTM E18, BS EN ISO 6508-1, BS EN ISO 6508-2) ASTM E18 BS EN ISO 6508-1		±1,2HRC
Vickers hardness test	EX-AE-OP-MEC-PL-MD27069 (BS EN ISO 6507, BS EN ISO 9015-1,	Micro	±5,6HV

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	MSRR9969, ASTM E384, ASTM E92) ASTM E92 ASTM E384 BS EN ISO 6507-1		
Impact test	EX-AE-OP-MEC-PL-MD27071 ASTM E23 ASTM A370 BS 131 part 1 BS EN 10045-1:1990 BS EN ISO 148-1	ASTM Above 30J ASTM Below 30J BS Above 40J BS Below 40J	8,3J 2,8J 13J 5,2J
Fatigue test	EX-AE-OP-FE-PL-MD27089 (BS 3518 : Part 1, BS 3518: Part 3, ASTM E466, ASTM E467, ASTM E468, EN 6072) EX-AE-OP-FE-PL-MD27090 (ASTM E606, BS 3518 Part 1, BS 3518 Part 3, BS 7270, GE E50TF148) BS 3518-1 BS 3518-3 BS 7270 ASTM E466 ASTM E606/606M	: force control strain control	±13.3% of fatigue life ±13.7% of fatigue life
Fracture toughness test	EX-AE-OP-FE-PL-MD27061 (ASTM E399, ASTM B645, BS EN ISO 12737, BS 7448:Part 1, ASTM E561) ASTM E399 ASTM E561 BMS 7-323	R Curve	±1.4% of K value ±5.4% of K value

History of changes: