

2024 Schedule - PTP Metallic scheme

Mechanical testing-----p.2	Chemistry-----p.3
<i>Tensile and compression</i>	Corrosion-----p.3
<i>Fracture</i>	Surface treatment-----p.3
<i>Impact</i>	Powders-----p.3
<i>Fatigue</i>	Fasteners-----p.3
<i>Creep and stress rupture</i>	Machining-----p. 3
<i>Hardness</i>	
Metallography-----p.3	

- **Official Launch** – 4th January 2024
- **Kit delivery** – From 1st March 2024
- **Results submission deadline** – 15th June 2024
- **Individual reports publication** – From 15th July 2024

[ISO 17043 accreditation](#)

Cofrac accreditation number: 1-2466

Section	Kit	Old name	Test	Standards	2024	2025	2026	2027	2028
Mechanical - Tensile, compression	M-Tens-1	1-1	Tensile	ASTM E8/E8M-22 ISO 6892-1 (2019) EN 2002-1 (2005)	X	X	X	X	X
	M-Tens-2	1-2	Tensile	ASTM B557-15 ISO 6892-1 (2019) EN 2002-1 (2005)	X	X	X	X	X
	M-Tens-3	1-3	Tensile	ASTM B557-15 ISO 6892-1 (2019) EN 2002-1 (2005)	X	X	X	X	X
	M-Tens-4	1-4	Tensile	ASTM E8/E8M-22 ISO 6892-1 (2019) EN 2002-1 (2005)	X	X	X	X	X
	M-Tens-5	1-5	Tensile	ASTM E8/E8M-22 ISO 6892-1 (2019) EN 2002-1 (2005)	X	X	X	X	X
	M-Tens-6	1-6	Tensile	ASTM E8/E8M-22 ISO 6892-1 (2019) EN 2002-1 (2005)	X	X	X	X	X
	M-Tens-7	2-1	Elevated Temperature Tensile	ASTM E21-20 ISO 6892-2(2018) EN 2002-2 (2006)	X	X	X	X	X
	M-Comp-1	11-2	Compression	ASTM E9-19 (2019)	X	X	X	X	X
Mechanical - Fracture	M-K1C-1	4-1	Fracture toughness - CT	ASTM E399-22	X	X	X	X	X
	M-dadN-1	4-2	Crack propagation - dadN	ASTM E647-15e1		X		X	
	M-dadN-2	4-3	Crack propagation - dadN	ASTM E647-15e1	X		X		X
	M-RCurv-1	4-4	R Curve	ASTM E561-20	X		X		X
	M-K1C-2	4-5	Fracture toughness - CT	ASTM E399-20a	X		X		X
Mechanical - Impact	M-Impact-1	5-1	Charpy test - KCV	ASTM E23-18 EN ISO 148-1 (2016)	X	X	X	X	X
	M-Impact-2	5-2	Charpy test - KCV	ASTM E23-18 EN ISO 148-1 (2016)	X	X	X	X	X
	M-Impact-3	5-3	Charpy test - IZOD	ASTM E23-18 EN ISO 148-1 (2016)	X	X	X	X	X
Mechanical - Fatigue	M-Fatig-1	9-1	Low Cycle Fatigue	ASTM E606-21 EN 6072 (2010)	X	X	X	X	X
	M-Fatig-2	9-2	High Cycle Fatigue	ASTM E466-21 EN 6072 (2010)		X		X	
	M-Fatig-3	9-3	High Cycle Fatigue	ASTM E466-15 EN 6072 (2012)	X		X		X
	M-Fatig-4	9-4	Rotative bending	ISO 1143 (2010)		X		X	
Mechanical - Creep, Stress rupture	M-Creep-1	3-1	Creep	ASTM E139-11 (2018) EN 2002-005 (2008) ISO 204:2018	X	X	X	X	X
	M-Rupt-1	3-2	Stress rupture	ASTM E139-11 (2018) EN 2002-005 (2008) ISO 204:2018	X	X	X	X	X
Mechanical - Hardness	M-Hard-1	6-1	Rockwell C / Vickers Hardness	ASTM E18-20 or ISO 6508-1:2016 or ISO 6507	X	X	X	X	X
	M-Hard-2	6-2	Brinell/Rockwell B Hardness	ASTM E10-18 EN ISO 6506-1 (2014) ASTM E18-22 EN ISO 6508-2	X	X	X	X	X
	M-Hard-3	6-3	Carburized depth measurement	ISO 18203:2016 ASTM E1077-14(2021) ASTM E384-22 EN ISO 6507-1:2018	X	X	X	X	X
	M-Hard-4	6-4	Rockwell/Brinell Hardness	Rockwell "C": ASTM E18-22 ISO 6508-1:2016 Brinell: ASTM E10-18 EN ISO 6506-1 (2014)	X	X	X	X	X
	M-Hard-5	6-5	Rockwell Y Hardness	ASTM E10-18 EN ISO 6506-1 (2014)	X	X	X	X	X

Section	Kit	Old name	Test	Standards	2024	2025	2026	2027	2028
Metallography	M-Micr-1	10-1 Al	Grain size Al	ASTM E112-13(2021)	X	X	X	X	X
	M-Micr-2	10-1 Ni	Grain size Ni	ASTM E112-13(2021)	X	X	X	X	X
	M-Micr-3	10-1 Ti	Grain size Ti	ASTM E112-13(2021)	X	X	X	X	X
	M-Micr-4	10-1 Fe	Grain size Fe	ASTM E112-13(2021)	X	X	X	X	X
	M-Micr-5	10-2	Alpha case depth determination	EN 2003-009 (2007) (meth A)	X	X	X	X	X
	M-Micr-6	10-3	Alloy depletion	N/A	X	X	X	X	X
	M-Micr-7	10-4	Inclusion rate	ASTM E45-18a	X	X	X	X	X
	M-Micr-8	10-5	Porosity	N/A	X	X	X	X	X
	M-Micr-9	10-6	Welding	EN ISO 17639:2022		X	X	X	X
	M-Elec-1	10-7	Conductivity	EN 2004-1 (1993)	X	X	X	X	X
Chemistry	M-Chem-1	8-1	Chemistry - Aluminium base	N/A	X	X	X	X	X
	M-Chem-2	8-2	Chemistry - Nickel base	N/A	X	X	X	X	X
	M-Chem-3	8-3	Chemistry - Iron base	N/A	X	X	X	X	X
	M-Chem-4	8-4	Chemistry - Titanium base	N/A	X	X	X	X	X
	M-Chem-5	8-5	Chemistry - Cast material	N/A	X	X	X	X	X
	M-Chem-6	8-6	Chemistry - Cobalt base	N/A	X	X	X	X	X
	M-Chem-7	8-7	Chemistry - Powder	N/A	X	X	X	X	X
	M-Chem-8	8-8	Chemistry - Cast Aluminium	N/A	X		X		X
	M-Chem-9	8-9	Chemistry - Magnesium base	N/A	X	X	X	X	X
	M-Chem-10	8-10	Chemistry - Copper base	ASTME 1941	X	X	X	X	X
Corrosion	M-Corr-1	7-1	Salt Spray	ASTM B117-19 ISO 9227:2017	X	X	X	X	X
	M-Corr-2	7-2	Salt Spray	ISO 9227 (2017) ASTM B117-19	X	X	X	X	X
	M-Corr-3	7-3	Stress corrosion	ASTM G44-21 ASTM G47-20 ASTM G49-85 (2019)	X		X		X
Surface treatment	M-Coat-1	10-8	Thickness - Micro + Eddy current	Eddy Currents: ISO 2808:2019 ISO 2360:2017 Microscopic: ISO 1463 (2021)	X	X	X	X	X
	M-Coat-2	10-9	Adhesion - Cross cut area	ISO 2409 (2020) ISO 2812-2 (2018)	X	X	X	X	X
	M-Coat-3	10-10	Thickness - Nickel plating	ISO 1463 (2021)	X				
	M-Chem-11	16-1	Surface treatment bath	AITM 3-0030 AITM 3-0032 AITM 3-0035 AITM 3-0036		X		X	
Powders	M-Dens-1	15-1	Apparent Density	ASTM B417-22 ASTM B703-21 ASTM B212-21 ISO 3923-1 (2018)	X	X	X	X	X
	M-Dens-2	15-2	Tap Density	ASTM B527-23 ISO 3953 (2011)	X	X	X	X	X
	M-Flow-1	15-3	Flow rate	ASTM B213-20 (method 1) ISO 4490 (2018)	X	X	X	X	X
	M-PSize-1	15-4	Particle Size Distribution - Laser Method	ASTM B822-20 ISO 13320 (2020)	X	X	X	X	X
	M-PSize-2	15-5	Particle Size Distribution - Sieve Analysis	ASTM B214-22	X	X	X	X	X
	M-ShotP-1	17-1	Shot peening	ISO 3310-1:2016 ISO 6507-1:2018	X		X		X
Fasteners	F-Tens-1	12-2	Tensile Strength	ASTM F606/F606M-19, §3.5.1		X		X	
	F-Coat-1	12-3	Thickness	ASTM B487-20		X		X	
	F-Tens-2	12-4	Tensile Strength	NASM1312-8 Rev 2 (2011)	X	X	X	X	X
	F-Fatig-1	12-5	SLS	NASM1312-11 Rev 1 (2013)	X	X	X	X	X
	F-Fatig-2	9-5	Tensile Fatigue	NASM 1312-21 (Rev 1 2004)					
	F-Shear-1	12-7	Single shear	NASM1312-13 Rev 1 (2013)	X	X	X	X	X
	F-Shear-2	12-6	Double Shear	NASM1312-13 Rev 2 (2013)	X	X	X	X	X
Machining	M-Mach-1	14-1	Machining	N/A	X		X		X
	M-Mach-2	14-2	XRD	ISO 15305	X				
	M-Embr-1	3-3	H embrittlement	EN 2832-93 ASTM F519-18		X		X	
	M-Bear-1	11-1	Bearing	ASTM E238-17a		X		X	