

Laboratory

BISS Labs-Division of ITW India Private Limited, No. 497E, 14th Cross, 4th Phase, Peenya Industrial Area, Bangalore, Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number

TC-7512

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Validity

05.08.2019 to 28.06.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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MECHANICAL TESTING

I.	MECHANICAL PROPERTIES OF METALS			
1.	Ferrous & Non-Ferrous materials, alloys & products	Tensile Test: 0.2% YS UTS, %EL	ASTM E8/E8M-16a	10 MPa to 1200 MPa 10 MPa to 1500 MPa 1 % to 30 % (Load Upto 450 kN)
		Compression Test: Compressive strength YS	ASTM E9-18	10 MPa to 1200 MPa 10 MPa to 1500 MPa (Load Upto 450 kN)
		Elevated tensile Test: 0.2% YS UTS, %EL	ASTM E21-17	10 MPa to 900 MPa 10 MPa to 1200 MPa 1 % to 50 % (Load Upto 450 kN)
		Poisson's ratio	ASTM E132-17	0.05 to 0.4 (Load Upto 450 kN)
		Fracture toughness (K1c)	ASTM E399-17	5 MPa√m to 100 MPa√m (Load Upto 900 kN)
		Fracture toughness using K, J and CTOD parameters	ASTM E1820-17	5 kJ/m ² to 400 kJ/m ² (Load Upto 900 kN)
		Axial fatigue	ASTM E 466-15	Qualitative (Flat: 0.25 mm to 25 mm Round: 0.25 mm to 24 mm Frequency :0.01Hz to 100 Hz (Load up to 450 kN))
Axial Fatigue for fatigue properties	ASTM E 606M-12	Qualitative (Round Upto 24mm (Load Upto 90kN))		

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		Fatigue Crack growth	ASTM E647-15E1	Qualitative (Crack growth a/w ratio 0.7/ (Load Upto 90 kN))
		Thermo- mechanical uniaxial fatigue	ASTM E2368-10(2017)	Qualitative (Upto 1000 °C 10 MPa to 900 MPa Round from 0.25 mm to 24 mm (Load Upto 90 kN))
		Creep Fatigue loading	ASTM E2714-13	Qualitative (Upto 1000 °C 10 MPa to 900 MPa Round from 0.25 mm to 24 mm (Load up to 450 kN))
		Tensile Shear Strength Test (for adhesives for bonding metals)	ASTM D3528-96(2016)	Load Upto 90 kN
		Fatigue	IS 16651:2017	Qualitative (10 MPa to 900 MPa (Load Upto1800 kN))
II.	PLASTICS AND PLASTIC PRODUCTS			
1.	Isotropic and orthotropic Reinforced Plastic composites	Tensile Test %EI, UTS, Young's Modulus	ISO 527-4 / ASTM D3039M-17	1% to 30% 10 MPa to 1500MPa Upto 50 GPa (Load upto 900 kN)
		Uniaxial Fatigue	ISO13003-2003	Qualitative (0.01Hz to 100Hz Flat :0.25mm to 24mm (Load upto 450 kN))

Prachi Kukreti
Convenor

Mallika Gope
Program Manager

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		Tensile shear (Max load Shear modulus, Shear strength)	ISO14129:1997	10 GPa to 20 GPa 10 MPa to 300 MPa (Load upto 90 kN)
2.	Unreinforced and reinforced Plastics	Tensile Test: (UTS, Young's Modulus)	ASTM D638-14	10 MPa to 900 MPa 10 GPa to 50 GPa (Load upto 90 kN)
3.	Unreinforced and reinforced Plastics and electrical insulating materials	Flexural strength	ASTM D790-17	10 MPa to 800MPa (Load upto 90 kN)
4.	Polymer matrix composite	Flexural strength	ASTM D2344/D2344M -16	10 MPa to 500MPa (Load upto 90 kN)
5.	Unreinforced and reinforced composites	Shear (Shear strength)	ASTM D5379-12	10 MPa to 300 MPa (Load upto 90 kN)
6.	Polymer matrix composites	Compressive strength	ASTM D3410/D3410M-16	10 MPa to 1000 MPa (Load upto 90 kN)
		Compression strength	ASTM D6484/D6484-16	10 MPa to 1000 MPa (Load upto 90 kN)
7.	Isotropic and orthotropic Reinforced Plastic composites	Peel resistance	ASTM D1781-98(2012)	Load upto 90 kN
8.	Structural Adhesives	Fatigue	ISO 9664-1993	Qualitative (10 MPa to 500 MPa (Load upto 90 kN))
9.	Isotropic and orthotropic Reinforced Plastic composites	Cracked Sandwich Beam Test (Max load compressive strength)	ASTM C393-16	10 MPa to 500 MPa (Load upto 90 kN)
		Face wrinkle	ASTM C393-16	Load upto 90 kN
		Shear	ASTM C 273M-16	Load upto 90 kN
		Compression	ASTM D1621-16	Load upto 90 kN
		Compression	ISO 14126:2002	10MPa to 1000 MPa

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		(compressive strength, Young's Modulus)		1 GPa to 50 GPa (Load upto 90 kN)
III.	RUBBER AND RUBBER PRODUCTS			
1.	Rubber, Vulcanised or thermoplastic	Fatigue	ISO 4664-1;2011(E)	0.01 Hz to 150Hz (Load Upto 90 kN)
2.	Sandwich panel	Tensile shear	ASTM C297/ASTM C297 / C297M - 16	Load Upto 90 kN