National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 1 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper - Vernier / Dial / Digital (L.C.: 10 µm)	Using Caliper Checker by Comparison Method	0 to 600 mm	11.9 µm
2	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer - Analog / Dial / Digital (L.C.: 1 µm)	Using Slip Gauge Blocks by Comparison Method	0 to 25 mm	3 µm
3	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge - Dial / Digital (L.C.: 10 µm)	Using Caliper Checker by Comparison Method	0 to 300 mm	9 µm
4	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Rapid Plastimeter (LVDT) - Length (L.C.: 1 µm)	Using Slip Gauge Blocks by Comparison Method as per ASTM D 3194 04	0 to 1 mm	1.9 µm
5	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thickness Gauge - Dial / Digital (L.C.: 1 µm)	Using Slip Gauge Blocks by Comparison Method	0 to 12 mm	2.8 µm
6	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thickness Gauge - Dial / Digital (L.C.: 10 µm)	Using Slip Gauge Blocks by Comparison Method	0 to 25 mm	9 µm

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 2 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
7	MECHANICAL-DUROMETER	Durometer - Shore - A	Using Duro Calibrator by Spring Force Method as per ISO 18898:2016, ASTM D 2240-05	0 Shore to 100 Shore	0.46 Shore
8	MECHANICAL-DUROMETER	Durometer - Shore - A	Using Slip Gauges by Indentation Method as per ISO 18898:2016, ASTM D 2240-05	0 Shore to 100 Shore	0.25 Shore
9	MECHANICAL-DUROMETER	Durometer - Shore - D	Using Duro Calibrator by Spring Force Method as per ISO 18898:2016, ASTM D 2240-05	0 Shore to 100 Shore	0.58 Shore
10	MECHANICAL-DUROMETER	Durometer - Shore - D	Using Slip Gauges by Indentation Method as per ISO 18898:2016, ASTM D 2240-05	0 Shore to 100 Shore	0.59 Shore
11	MECHANICAL-HARDNESS TESTING MACHINES	Time Indicator for Rapid Plastimeter, PRI Ageing Chamber, IRHD Micro, IRHD (N) Hardness Tester and Digital Shore - A, Shore AM Hardness Tester	Using Digital Stopwatch by Comparison Method as per ASTM D 3194-04, ISO 18898:2016	0 to 60 minute	0.62 s
12	MECHANICAL-PRESSURE INDICATING DEVICES	Analog / Digital - Pressure Gauge, Pressure Transmitter with Indicator - Hydraulic Pressure	Using Digital Pressure Gauge, Hydraulic Hand Pump by Comparison Method as per DKD-R 6-1	0 to 700 bar	0.12 % rdg

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 3 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
13	MECHANICAL-PRESSURE INDICATING DEVICES	Analog / Digital - Pressure Gauge, Pressure Transmitter with Indicator - Hydraulic Pressure	Using Digital Pressure Gauge, Hydraulic Hand Pump by Comparison Method as per DKD-R 6-1	0 to 200 bar	0.32 % rdg
14	MECHANICAL-PRESSURE INDICATING DEVICES	Analog / Digital - Pressure Gauge, Pressure Transmitter with Indicator - Pneumatic Pressure	Using Digital Pressure Calibrator, Pneumatic Hand Pump by Comparison Method as per DKD-R 6-1	0 to 20 bar	0.29 % rdg
15	MECHANICAL-VOLUME	Micropipette	Using Triple Distilled Water, Electronic Weighing Balance of Readability : 0.01 mg by Gravimetric Method as per ISO 8655-6:2022	100 µl to 1000 µl	0.8 µl
16	MECHANICAL-VOLUME	Single Volume Pipette, Graduated Pipette, Burette, Volumetric Flask, Graduated Measuring Cylinder	Using Triple Distilled Water, Electronic Weighing Balance of Readability : 0.01 mg by Gravimetric Method as per ISO 4787:2021	1 ml to 10 ml	0.1 ml
17	MECHANICAL-VOLUME	Single Volume Pipette, Graduated Pipette, Burette, Volumetric Flask, Graduated Measuring Cylinder	Using Triple Distilled Water, Electronic Weighing Balance of Readability : 0.01 mg by Gravimetric Method as per ISO 4787:2021	250 ml to 500 ml	0.14 ml

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 4 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
18	MECHANICAL-VOLUME	Single Volume Pipette, Graduated Pipette, Burette, Volumetric Flask, Graduated Measuring Cylinder	Using Triple Distilled Water, Electronic Weighing Balance of Readability : 0.01 mg by Gravimetric Method as per ISO 4787:2021	10 ml to 250 ml	0.14 ml
19	MECHANICAL-WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	10 g	0.012 mg
20	MECHANICAL-WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	2 g	0.012 mg
21	MECHANICAL-WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	20 g	0.02 mg

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 5 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
22	MECHANICAL-WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	200 g	0.1 mg
23	MECHANICAL-WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	5 g	0.012 mg
24	MECHANICAL-WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	50 g	0.03 mg
25	MECHANICAL-WEIGHTS	Accuracy class F1 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	1 g	0.012 mg

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 6 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
26	MECHANICAL-WEIGHTS	Accuracy class F1 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	100 g	0.1 mg
27	MECHANICAL-WEIGHTS	Accuracy class F1 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	100 mg	0.012 mg
28	MECHANICAL-WEIGHTS	Accuracy class F1 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	200 mg	0.012 mg
29	MECHANICAL-WEIGHTS	Accuracy class F1 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	50 mg	0.012 mg

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 7 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
30	MECHANICAL-WEIGHTS	Accuracy class F1 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	500 mg	0.012 mg
31	MECHANICAL-WEIGHTS	Accuracy class F2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	1 mg	0.012 mg
32	MECHANICAL-WEIGHTS	Accuracy class F2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	10 mg	0.012 mg
33	MECHANICAL-WEIGHTS	Accuracy class F2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	2 mg	0.012 mg

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 8 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
34	MECHANICAL-WEIGHTS	Accuracy class F2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	20 mg	0.012 mg
35	MECHANICAL-WEIGHTS	Accuracy class F2 & coarser	Using E1 Class Standard Weight and Electronic Balance (Readability : 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1	5 mg	0.012 mg
36	THERMAL-SPECIFIC HEAT & HUMIDITY	Temperature of Analog / Digital Thermo Hygrometer / Thermo Hyrograph / Humidity Sensor / Data Logger / Transmitter with Indicator @ 50 %RH	Using Digital Thermometer with RTD Sensor, Humidity Indicator with Sensor, Temperature and Humidity Generator by Comparison Method	10 °C to 50 °C	0.43 °C
37	THERMAL-SPECIFIC HEAT & HUMIDITY	Thermo Hygrometer, RH Meter with Sensor - @ 25°C	Using Digital Humidity Indicator with Sensor, Digital Thermometer with RTD Sensor, Temperature and Humidity Generator by Comparison Method	20 % RH to 80 % RH	1 %RH
38	THERMAL-TEMPERATURE	Liquid in Glass Thermometer	Using Oil Bath, Digital Thermometer with RTD Sensor by Comparison Method	> 50 °C to 250 °C	0.6 °C

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 9 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
39	THERMAL-TEMPERATURE	Liquid in Glass Thermometer	Using Liquid Bath, Digital Thermometer with RTD Sensor by Comparison Method	(-) 70 °C to 50 °C	0.6 °C
40	THERMAL-TEMPERATURE	Temperature Gauge - Analog (Dial) / Digital , Thermometer / Temperature Controller / Indicator with Sensor (RTD / Thermocouple with Indicator)	Using Liquid Bath, Digital Thermometer with RTD Sensor by Comparison Method	(-) 70 °C to 50 °C	0.35 °C
41	THERMAL-TEMPERATURE	Temperature Gauge - Analog (Dial) / Digital, Thermometer / Temperature Controller / Indicator with Sensor (RTD, Thermocouple)	Using Oil Bath, Digital Thermometer with RTD Sensor by Comparison Method	50 °C to 290 °C	0.1 °C
42	THERMAL-TEMPERATURE	Temperature Gauge - Analog (Dial) / Digital, Thermometer / Temperature Controller / Indicator with Sensor (Thermocouple)	Using Dry Block Source, Digital Thermometer with R Type Sensor by Comparison Method	250 °C to 600 °C	1.72 °C
43	THERMAL-TEMPERATURE	Temperature Gauge - Analog / Digital, Thermometer / Temperature Controller / Indicator with Sensor (Thermocouple with Indicator)	Using Dry Block Source, Digital Thermometer with R Type Sensor by Comparison Method	600 °C to 1200 °C	2.5 °C

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 10 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Site Facility					
1	MECHANICAL-ACCELERATION AND SPEED	Drum Rotational Speed of Tyre Endurance Testing Machine, Centrifuge, RPM Indicator - Non Contact Type	Using Digital Tachometer by Comparison Method	> 10000 RPM to 25000 RPM	2 RPM
2	MECHANICAL-ACCELERATION AND SPEED	Drum Rotational Speed of Tyre Endurance Testing Machine, Centrifuge, RPM Indicator - Non Contact Type	Using Digital Tachometer by Comparison Method	> 100 RPM to 10000 RPM	1 RPM
3	MECHANICAL-ACCELERATION AND SPEED	Drum Rotational Speed of Tyre Endurance Testing Machine, Centrifuge, RPM Indicator - Non Contact Type	Using Digital Tachometer by Comparison Method	10 RPM to 100 RPM	0.99 RPM
4	MECHANICAL-ACCELERATION AND SPEED	Test Speed of UTM / Material Testing Machine (Universal Testing Machine, Tensile Tester, Plunger Tester-Vertical Speed, Tyre Static Characteristics Machine-Vertical)	Using Digital Height Gauge and Stop Watch as per ASTM E 2658-15	6 mm/min to 500 mm/min	0.44 %
5	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Displacement of Measuring System and Device used in Material Testing Machine / UTM	Using Digital Height Gauge by Comparison Method	5 mm to 300 mm	0.2 mm

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 11 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
6	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Rapid Plastimeter (LVDT) - Length (L.C.: 1 µm)	Using Slip Gauge Blocks by Comparison Method as per ASTM D 3194 04	0 to 1 mm	1.9 µm
7	MECHANICAL-HARDNESS TESTING MACHINES	Incremental Indentation Depth of IRHD Dead Load Hardness Tester (Method N) and Verification of Metrological Requirement	Using Dimensional Slips, Digital Micrometer, Digital Vernier Caliper by Comparison Method as per ISO 18898:2016, ISO 48	30 IRHD to 100 IRHD	0.18 IRHD
8	MECHANICAL-HARDNESS TESTING MACHINES	Incremental Indentation Depth of IRHD Micro Hardness Tester (Method M) and Verification of Metrological Requirement	Using Dimensional Slips, Digital Micrometer, Digital Vernier Caliper by Comparison Method as per ISO 18898:2016, ISO 48	30 IRHD to 100 IRHD	0.18 IRHD
9	MECHANICAL-HARDNESS TESTING MACHINES	IRHD Micro Hardness Tester - Contact Force	Using Weighing Balance by Comparison Method as per ISO 18898	8.3 mN	0.08 mN
10	MECHANICAL-HARDNESS TESTING MACHINES	IRHD Micro Hardness Tester - Total Force on Indentor	Using Weighing Balance by Comparison Method as per ISO 18898	153.3 mN	0.12 mN
11	MECHANICAL-HARDNESS TESTING MACHINES	Shore - AM, A, Micro Hardness Tester in Shore - A Scale	Using Electronic Weighing Balance (Readability : 0.01 g) by Spring Force Method as per ISO 18898:2016	0 Shore to 100 Shore	0.25 Shore

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 12 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
12	MECHANICAL-HARDNESS TESTING MACHINES	Shore - AM, A, Micro Hardness Tester Indentor Extension	Using Slip Gauge Blocks by Indentation Method as per ISO 18898:2016	0 Shore to 100 Shore	0.25 Shore
13	MECHANICAL-HARDNESS TESTING MACHINES	Time Indicator for Rapid Plastimeter, PRI Ageing Chamber, IRHD Micro, IRHD (N) Hardness Tester and Digital Shore - A, Shore AM Hardness Tester	Using Digital Stopwatch by Comparison Method as per ASTM D 3194-04, ISO 18898:2016	0 to 60 minute	0.62 s
14	MECHANICAL-PRESSURE INDICATING DEVICES	Analog / Digital - Pressure Gauge, Pressure Transmitter with Indicator - Hydraulic Pressure	Using Digital Pressure Gauge, Hydraulic Hand Pump by Comparison Method as per DKD-R 6-1	0 to 700 bar	0.12 % rdg
15	MECHANICAL-PRESSURE INDICATING DEVICES	Analog / Digital - Pressure Gauge, Pressure Transmitter with Indicator - Hydraulic Pressure	Using Digital Pressure Gauge, Hydraulic Hand Pump by Comparison Method as per DKD-R 6-1	0 to 200 bar	0.32 % rdg
16	MECHANICAL-PRESSURE INDICATING DEVICES	Analog / Digital - Pressure Gauge, Pressure Transmitter with Indicator - Pneumatic Pressure	Using Digital Pressure Calibrator, Pneumatic Hand Pump by Comparison Method as per DKD-R 6-1	0 to 20 bar	0.29 % rdg
17	MECHANICAL-TORQUE GENERATING DEVICES	Mooney Viscometer by known Torque	Using Certified Weights, Dimensional Measurement as per ASTM D1646 (Clause 9)	100 Mooney Units (8.3 Nm Single Torque)	0.084 Mooney Units

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 13 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
18	MECHANICAL-TORQUE GENERATING DEVICES	Moving Die Rheometer by Known Torque	Using Certified MDR Torque Standard as per ASTM D5289-07a (Clause - 6.5)	20.66 / 18.28 / 23.8 dNm / lbf-in / kgf-cm @ 0.5° Angle of Arc Oscillation	0.14 dNm
19	MECHANICAL-TORQUE GENERATING DEVICES	Moving Die Rheometer by Known Torque	Using Certified MDR Torque Standard as per ASTM D5289-07a (Clause - 6.5)	20.83 / 18.43 / 21.24 dNm / lbf-in / kgfcm @ 0.5° Angle of Arc Oscillation	0.14 dNm
20	MECHANICAL-TORQUE GENERATING DEVICES	Moving Die Rheometer by Known Torque	Using Certified MDR Torque Standard as per ASTM D5289-07a (Clause - 6.5)	23.58 / 20.87 / 24.04 dNm / In-Lbs / kgf-cm @ 0.5° Angle of Arc Oscillation	0.2 dNm
21	MECHANICAL-TORQUE GENERATING DEVICES	Moving Die Rheometer by Known Torque	Using Certified MDR Torque Standard as per ASTM D5289-07a (Clause - 6.5)	41.32 / 36.57 / 42.13 dN-m / lbf-in / kgf-cm @ 1° Angle of Arc Oscillation	0.14 dNm
22	MECHANICAL-TORQUE GENERATING DEVICES	Moving Die Rheometer by Known Torque	Using Certified MDR Torque Standard as per ASTM D5289-07a (Clause - 6.5)	41.66 / 36.87 / 42.48 dNm / lbf-in / kgf-cm @ 1° Angle of Arc Oscillation	0.14 dNm
23	MECHANICAL-TORQUE GENERATING DEVICES	Moving Die Rheometer by Known Torque	Using Certified MDR Torque Standard as per ASTM D5289-07a (Clause - 6.5)	47.16 / 41.73 / 48.09 dN-m / lbf-in / kgf-cm @ 1° Angle of Arc Oscillation	0.14 dNm
24	MECHANICAL-TORQUE GENERATING DEVICES	Moving Die Rheometer by Known Torque	Using Certified MDR Torque Standard as per ASTM D5289-07a (Clause - 6.5)	47.52 / 42.05 / 48.45 dNm / lbf-in / kgf-cm @ 1° Angle of Arc Oscillation	0.14 dNm

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 14 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
25	MECHANICAL-TORQUE GENERATING DEVICES	Moving Die Rheometer by known Torque Standard	Using Certified MDR Torque Standard as per ASTM D5289-07a (Clause -6.5)	23.76 / 21.03 / 27.38 dNm / lbf-in / kgf-cm @ 0.5° Angle of Arc Oscillation	0.2 dNm
26	MECHANICAL-TORQUE GENERATING DEVICES	Oscillating Disk Rheometer by Known Torque	Using Certified ODR Torque Standard as per ASTM D2084 (Clause 10)	14.76 / 13.06 / 17.01 dNm / lbf-in / kgf-cm @ 1° Angle of Arc Oscillation	0.2 dNm
27	MECHANICAL-TORQUE GENERATING DEVICES	Oscillating Disk Rheometer by Known Torque	Using Certified ODR Torque Standard as per ASTM D2084 (Clause - 10)	20.71 / 18.33 / 21.12 dNm / lbf-in / kgf-cm @ 1° Angle of Arc Oscillation	0.23 dNm
28	MECHANICAL-TORQUE GENERATING DEVICES	Oscillating Disk Rheometer by Known Torque	Using Certified ODR Torque Standard as per ASTM D2084 (clause - 10)	44.28 / 39.19 / 45.15 dNm / lbf-in / kgf-cm @ 3° Angle of Arc Oscillation	0.2 dNm
29	MECHANICAL-TORQUE GENERATING DEVICES	Oscillating Disk Rheometer by Known Torque	Using Certified ODR Torque Standard as per ASTM D2084 (Clause 10)	62.07 / 54.93 / 63.29 dNm / lbf-in / kgf-cm @ 3° Angle of Arc Oscillation	0.23 dNm
30	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Plunger Tester / Load Deflection Machine / UTM - Compression Mode	Using Load Cell with Indicator by Comparison Method as per IS 1828 (Part 1) : 2022, ISO 7500-1 : 2018	2.5 kN to 100 kN	0.28 %
31	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Plunger Tester / Load Deflection Machine / UTM - Compression Mode	Using Load Cell with Indicator by Comparison Method as per IS 1828 (Part 1) : 2022, ISO 7500-1 : 2018	1000 N to 10 kN	0.3 %

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 15 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
32	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Plunger Tester / Load Deflection Machine / UTM - Compression Mode	Using Load Cell with Indicator by Comparison Method as per IS 1828 (Part 1) : 2022, ISO 7500-1 : 2018	2.5 kN to 200 kN	0.28 %
33	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	UTM - Compression Mode	Using Integral Ring with Dial Gauge and Compression Pads by Comparison Method as per IS 1828 (Part 1) : 2022	300 kN to 2000 kN	0.75 %
34	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	UTM - Tension Mode	Using Load Cell with Indicator by Comparison Method as per IS 1828 (Part 1) : 2022, ISO 7500-1 : 2018	1 kN to 10 kN	0.28 %
35	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	UTM - Tension Mode	Using Load Cell with Indicator by Comparison Method as per IS 1828 (Part 1) : 2022, ISO 7500-1 : 2018	100 N to 1000 N	0.28 %
36	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance - Class II & Coarser (Readability : 0.001 g)	Using E2 Class Weights by Comparison Method as per OIML R 76-1	0 to 1 kg	3 mg
37	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance - Class III & Coarser (Readability : 1 g)	Using F1 Class Weights by Comparison Method as per OIML R 76-1	0 to 20 kg	4 g

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 16 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
38	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance, Electronic Balance of Densimeter - Class I & Coarser (Readability : 0.01 mg)	Using E1 Class Weights by Comparison Method as per OIML R 76-1	0 to 200 g	0.24 mg
39	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity of Climatic / Environmental Chamber - Multi Position (Minimum 9 Sensors) @ 25°C	Using Digital Thermo Hygrometer, Humidity Sensors with Indicator & Digital Thermometer with RTD Sensor by Comparison Method	20 % RH to 80 % RH	3.85 % RH
40	THERMAL-SPECIFIC HEAT & HUMIDITY	Temperature of Climatic / Environmental Chambers - Multi Position (Minimum 9 Sensors)	Using Data Logger with PT100 Sensors by Comparison Method	(-) 70 °C to 200 °C	2.01 °C
41	THERMAL-TEMPERATURE	Indicator with TC of Furnace - Single Position	Using Digital Thermometer with R Type Thermocouple by Comparison Method	300 °C to 1200 °C	2.3 °C
42	THERMAL-TEMPERATURE	Temperature Gauge - Analog (Dial) / Digital , Thermometer / Temperature Controller / Indicator with Sensor (RTD / Thermocouple with Indicator)	Using Liquid Bath, Digital Thermometer with RTD Sensor by Comparison Method	(-) 70 °C to 50 °C	0.35 °C

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 17 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
43	THERMAL-TEMPERATURE	Temperature Gauge - Analog (Dial) / Digital, Thermometer / Temperature Controller / Indicator with Sensor (RTD, Thermocouple)	Using Oil Bath, Digital Thermometer with RTD Sensor by Comparison Method	50 °C to 290 °C	0.1 °C
44	THERMAL-TEMPERATURE	Temperature Gauge - Analog (Dial) / Digital, Thermometer / Temperature Controller / Indicator with Sensor (Thermocouple)	Using Dry Block Source, Digital Thermometer with R Type Sensor by Comparison Method	250 °C to 600 °C	1.72 °C
45	THERMAL-TEMPERATURE	Temperature Gauge - Analog / Digital, Thermometer / Temperature Controller / Indicator with Sensor (Thermocouple with Indicator)	Using Dry Block Source, Digital Thermometer with R Type Sensor by Comparison Method	600 °C to 1200 °C	2.5 °C
46	THERMAL-TEMPERATURE	Temperature Indicator with Sensor of Mooney Shearing Disc Viscometer, Moving Die Rheometer, Oscillating Disk Rheometer, Rapid Plastimeter & PRI Ageing Chamber - Single Position	Using Digital Thermometer with RTD Sensor by Comparison Method	100 °C to 200 °C	0.16 °C

National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : ALFATEK SERVICES, TC 98 / 539 (1), SAPTHAGIRI, THRIPADAPURAM HILL, THIRUVANANTHAPURAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2880 **Page No** 18 of 18

Validity 16/03/2025 to 15/03/2029 **Last Amended on** 21/04/2025

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
47	THERMAL-TEMPERATURE	Temperature Indicators with Sensor of Environmental chamber, Hot Air Oven, Water Bath, Autoclave (Non Medical purpose), Incubator (Non Medical purpose), Deep Freezer (Single Position)	Using Digital Thermometer with PT100 Sensor by Comparison Method	(-) 70 °C to 300 °C	0.85 °C
48	THERMAL-TEMPERATURE	Temperature of Chamber, Hot Air Oven, Furnace, Water Bath, Autoclave, Incubator, Deep Freezer (Non Medical Purpose) - Multi Position (Minimum 9 Sensors)	Using Data Logger with PT 100 Sensors by Comparison Method	(-) 70 °C to 300 °C	1.24 °C

*** CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.**