Flexible Scope: V7.0 **Last revision: 2025-12-17**	Overview Methods within the flexible Scope of ISO/IEC 17025:2017 Accreditation Number: PL-19381-03	UL Solutions

Standard No. and Revision	Standard Title	Flexible Category	Limitations
1 - Rheological tests			
ASTM D1238-13	Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer	A	
ASTM D1238-20	Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer	A	
ASTM D1238-23	Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer	A	
ASTM D1238-23a	Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer	A	
ISO 1133-1:2022	Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics Part 1: Standard method	A	
ISO 1133-2:2011	Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics Part 2: Method for materials sensitive to time-temperature history and/or moisture	A	
ISO 11443:2021	Plastics- Determination of the fluidity of plastics using capillary and slit-die rheometers	A	
2 - Thermal stability Testing			
ASTM D1525-17	Standard Test Method for Vicat Softening Temperature of Plastics	A	
ASTM D1525-25	Standard Test Method for Vicat Softening Temperature of Plastics	A	
ASTM D648-18	Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position	A	
ISO 75-1:2020	Plastics-Determination of temperature of deflection under load- Part1: general test method	A	
ISO 75-2:2013	Plastics - Determination of the heat deflection temperature - Part 2: Plastics and hard rubber	A	
ISO 75-3:2004	Plastics - Determination of the heat deflection temperature - Part 3: High-strength curable laminates and long-fiber reinforced plastics	A	
ISO 75-3:2025	Plastics — Determination of temperature of deflection under load Part 3: High-strength thermosetting laminates and long-fibre-reinforced plastics	A	
ISO 306:2023	Plastics – Thermoplastics – Determination of Vicat softening temperature (VST)	A	
3 - Mechanical and technological tests			
3.1 - Tensile tests – Determination of the tensile strength of plastics			
ASTM D638-14	Standard Test Method for Tensile Properties of Plastics	B	
ASTM D638-22	Standard Test Method for Tensile Properties of Plastics	B	
ISO 527-1:2019	Plastics - Determination of tensile properties - Part 1: General principles	B	
ISO 527-2:2012	Plastics - Determination of tensile properties - Test conditions for molding and extrusion compounds	B	

ISO 527-2:2025	Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics	B	
ISO 527-3:2018	Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets	B	
ISO 527-4-1997	Plastics – Determination of tensile properties – Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites	B	
ISO 527-5:2021	Plastics – Determination of tensile properties – Part 5: Test conditions for unidirectional fibre-reinforced plastic composites	B	
3.2 - Tearing and separation tests			
DIN 53363:2003-10	Testing of plastic films - Tear test using trapezoidal test specimen with incision	A	
DIN 53530:1981	Testing of organic materials - Separation test on adhesively bonded fabric layers	A	
ISO 34-1:2022	Rubber, vulcanized or thermoplastic — Determination of tear strength — Part 1: Trouser, angle and crescent test pieces	A	
3.3 - Bending tests			
ASTM D790-17	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials	A	
ISO 178:2019	Plastics - Determination of flexural properties	A	
ASTM D648-18	Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position	A	
3.4 - Impact strength tests			
ASTM D256-10	Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics	A	
ASTM D256-23	Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics	A	
ASTM D256-24	Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics	A	
ISO 179-1:2023	Plastics — Determination of Charpy impact properties	A	
ISO 180:2023	Plastics - Determination of Izod impact strength	A	
ISO 6603-2:2023	Plastics — Determination of puncture impact behaviour of rigid plastics — Part 2: Instrumented impact testing	A	
3.5 - Determination of mechanical properties of electrical cables			
IEC/EN 60811-501 2012+AMD1:2018	Electric and optical fibre cables – Test methods for non-metallic materials – Part 501: Mechanical tests – Tests for determining the mechanical properties of insulating and sheathing compounds	A	
IEC/EN 60811-1-1 1993+A1:2001	Common test methods for insulating and sheathing materials of electric cables – Part 1: Methods for general application – Section 1: Measurement of thickness and overall dimensions – Tests for determining the mechanical properties	A	
3.6 - Hardness test			
ISO 2039-1:2001	Plastics - Determination of hardness - Part 1: Ball indentation test	A	
ISO 2039-2:1987	Plastics - Determination of hardness - Part 2: Rockwell hardness	A	
4 - Density determination			

ISO 1183-1:2019	Plastics - Methods for determining the density of non-foamed plastics - Part 1: Immersion method, liquid pycnometer method, and titration method (here: Method A - Immersion method)	A	
ISO 1183-1:2025	Plastics – Methods for determining the density of non-cellular plastics – Part 1: Immersion method, liquid pycnometer method and titration method	A	
5 - Testing the light and weather resistance of plastics and cables using xenon arc lamps			
SAE J2412:02-2024	Accelerated Exposure of Automotive Interior Trim Components Using a Controlled Irradiance Xenon-Arc Apparatus	B	
SAE J2527:2017	Performance Based Standard for Accelerated Exposure of Automotive Exterior Materials Using a Controlled Irradiance Xenon-Arc Apparatus	B	
6 - Optical testing methods			
6.1 - Gray scale			
DIN EN 20105-A02:1994	Colorfastness tests - Part A02: Gray scale for evaluating color change	A	
ISO 105-A02: 1993	Textiles — Tests for colour fastness Part A02: Grey scale for assessing change in colour	A	
6.2 - Gloss measurement			
ISO 2813:2014	Paints and varnishes - Determination of gloss value at 20°, 60° and 85°	A	
ASTM D523-14	Standard Test Method for Specular Gloss	A	
ASTM D523-14(2018)	Standard Test Method for Specular Gloss	A	
6.3 - Color measurement, yellowing, and gloss haze			
ISO/CIE 11664-3:2019	Colorimetry — Part 3: CIE tristimulus values	A	
ISO/CIE 11664-4:2019	Colorimetry — Part 4: CIE 1976 L*a*b* colour space	A	
DIN 5033-1:2017	Color measurement – Part 1: Basic concepts of colorimetry	A	
DIN 5033-7:2014	Color measurement – Part 7: Measurement conditions for body colors	A	
ISO 13468-2:2021	Plastics – Determination of the total luminous transmittance of transparent materials – Part 2: Double-beam instrument	A	
ASTM E308-18	Standard Practice for Computing the Colors of Objects by Using the CIE System	A	
ASTM D1003-13	Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics	A	only Procedure A—Hazemeter
ASTM D1003-21	Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics	A	only Procedure A—Hazemeter
ASTM E313-20	Standard Practice for Calculating Yellowness and Whiteness Indices from Instrumentally Measured Color Coordinates	A	
DIN 6167:1980	Description of the yellowing of nearly white or nearly colorless materials	A	
7 - Smell tests			
ISO 12219-4:2013	Interior air of road vehicles - Part 4: Method for the determination of the emissions of volatile organic compounds from vehicle interior parts and materials - Small chamber method	A	
ISO 12219-6:2017	Interior air of road vehicles - Part 6: Method for the determination of the emissions of semi-volatile organic compounds from vehicle interior parts and materials at higher temperature - Small chamber method	A	
ISO 16000-3:2022-09	Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor and test chamber air — Active sampling method	A	
VDA 270:2022	Determination of the odour characteristics in motor vehicles	A	

VDA 276-3:2022-05	Determination of the total concentration of hydrocarbon compounds in test chambers and vehicle interiors with a flame ionization detector (FID)	A	
8 - Testing fogging behavior			
DIN 75201:2024	Determination of the fogging characteristics of trim materials in the interior of automobiles	A	
ISO 6452:2021	Rubber- or plastics-coated fabrics — Determination of fogging characteristics of trim materials in the interior of automobiles	A	
9 - Thermodesorption analysis of organic emissions			
VDA 278:2016	Thermal Desorption Analysis of Organic Emissions for the Characterization of Non-Metallic Materials of Automobiles	A	
10 - Investigation of fire behavior			
ANSI/UL 94 dated January 5, 2024	Tests for Flammability of Plastic Materials for Parts in Devices and Appliances	A	Accredited part: Section 7 - Horizontal Burning Test and Section 8 - 50 W (20 mm) Vertical Burning Test
ASTM D3801-19	Standard Test Method for Measuring the Comparative Burning Characteristics of Solid Plastics in a Vertical Position	A	
ASTM D3801-19a	Standard Test Method for Measuring the Comparative Burning Characteristics of Solid Plastics in a Vertical Position	A	
ASTM D3801-20	Standard Test Method for Measuring the Comparative Burning Characteristics of Solid Plastics in a Vertical Position	A	
ASTM D3801-20a	Measuring the Comparative Burning Characteristics of Solid Plastics in a Vertical Position	A	
ASTM D635-18	Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position	A	
ASTM D635-22	Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position	A	
IEC 60695-11-10:2013	Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods	A	
IEC 60695-11-10:2013/COR1:2014	Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods	A	
IEC 60695-2-10:2021-10	Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure	A	
IEC 60695-2-11:2021-10	Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end products (GWEPT)	A	
IEC 60695-2-12:2021-10	Fire hazard testing – Part 2-12: Glowing/hot-wire based test methods – Glow-wire flammability index (GWFI) test method for materials	A	
IEC 60695-2-13:2021-08	Fire hazard testing – Part 2-13: Glowing/hot-wire based test methods – Glow-wire ignition temperature (GWIT) test method for materials	A	