

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 0067 Accredited to ISO/IEC 17025:2017	Smithers MSE Limited Issue No: 059 Issue date: 25 March 2025	
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Testing performed at the above address only		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
PLASTICS, RUBBER and COMPOSITE MATERIALS	<u>Chemical Analysis</u> Comparison of Molecular weight distribution by GPC	In-House procedures numbered: RT011.71.01 HTGPC of PEEK RT011.71.05 GPC with THF or Chloroform RT011.71.06 HTGPC of Polyolefins RT011.71.07 GPC with HFIP
	Identification of rubbers by infrared spectroscopy	In house method RT011.48 based on BS ISO 4650:2012
	Determination of solvent extract	In house method RT011.42 based on ISO 1407:2023 (equivalent to BS 7164:Part 3:1992 (withdrawn))
FOOD CONTACT TESTS	<u>Chemical Analysis</u> Overall migration into aqueous simulants	In house method RT011.49 based on BS EN 1186-3:2022 (total immersion) In house method RT011.52 based on BS EN 1186-3:2022 (article filling)
	Overall migration into iso-octane and ethanol	In house method RT011.38 based on BS EN 1186-3:2022
	Overall migration (levels of extractables) from elastomeric materials	In house method RT011.27 based on FDA Regulations Chapter 21, Section 177.2600 for Repeat use rubber articles



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PLASTICS, RUBBER and COMPOSITE MATERIALS	<u>Mechanical and Physical Tests</u>	
	Density	BS ISO 2781:2018 BS EN ISO 1183-1:2019:Method A
	Hardness	BS ISO 48-2:2018
	Indentation hardness	BS ISO 48-4:2018 BS EN ISO 868:2003
	Tensile properties (forces up to ± 200 kN)	BS ISO 37:2024 (Dumb-bells only)
	Compressive properties (forces up to ± 200 kN and -40°C to $+200^{\circ}\text{C}$)	BS ISO 7743:2017 BS EN ISO 604:2003
	Tensile strength, elongation, Poisson's ratio and elastic modulus (forces up to ± 200 kN and -40°C to $+200^{\circ}\text{C}$)	BS EN ISO 527-1: 2019 BS EN ISO 527-2: 2012 BS EN ISO 527-3: 2018
	Flexural properties	BS EN ISO 178:2019
	Izod impact strength	BS EN ISO 180:2023
	Charpy impact strength	BS EN ISO 179-1:2023
	Falling weight impact resistance	BS 2782:Part 3:Method 352D:1979 (withdrawn)
	Impact brittleness	BS ISO 812:2017
	Stress relaxation	BS ISO 3384-1:2024
	Low temperature crystallization effects (to -55°C)	BS ISO 3387:2020 (Vulcanised Samples Only)
	Low temperature stiffness (Static Gehman test)	BS ISO 1432:2021
	Standard atmospheres	BS ISO 23529:2016
	Elmendorf tear test	BS EN ISO 6383-2:2004
	Modulus in shear (Quad Shear)	BS ISO 1827:2022
	Tear strength	BS ISO 34-1:2022



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PLASTICS, RUBBER and COMPOSITE MATERIALS (cont'd)	<u>Mechanical and Physical Tests</u> (cont'd) Compression set Rebound resilience (Lupke) temperature range -10°C to 50°C Abrasion resistance	 BS ISO 815-1:2019 BS ISO 815-2:2019: Method 1 only BS ISO 4662 2017 BS ISO 4649:2017 (excluding 20 N load & Method B)
ENVIRONMENTAL TESTING	Resistance to ozone cracking (static) Heat resistance Salt spray (fog) corrosion	BS ISO 1431-1:2022 Excluding clause 11 BS ISO 188:2023 ASTM B117-19 ISO 9227:2017 (Conditioning)
THERMAL PROPERTIES and ANALYSIS	<u>Differential Scanning Calorimetry</u> General Principles Glass transition temperature (T _g) Temperature and Enthalpy of melting and crystallization	 BS EN ISO 11357-1:2023 BS EN ISO 11357-2:2020 BS EN ISO 11357-3:2018
CHEMICAL RESISTANCE	Effect of liquids Fluid Contamination	BS ISO 1817:2024 (Method A & B) MIL-STD-810G:CN1 Method 504.1 2008 MIL-STD-810H: Method 504.3 2019 DEF STAN 00-035: Part 3 Iss 5:Chapter 4-04 Test CN4 2017 BS 3G100:Part 2:Section 3:1991 Sub-section 3.12 RTCA/DO-160F:2007 RTCA/DO-160G:2010



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DIMENSIONAL MEASUREMENTS	Thickness	BS 2782:Part 6:Method 630A:1994 ISO 4593:1993
PRODUCT TESTING		
Elastomeric seals for pipe joints	Physical properties	BS EN 681-1:1996 BS EN 681-2, -3 and -4:2000 BS EN 682:2002
Cast acrylic sheet for baths and shower trays	Tensile Testing	BS EN 263:2008
Lay-Flat Fire Hoses of Type 1, Type 2, and Type 3 Construction Semi-Rigid Fire Hoses of Type A and Type B Construction	Hot Surface Resistance Test	BS 6391:2009 Chapter 8.6 and Annex G BS EN 694:2014 Chapter 6.5 and BS EN 15889:2011 Annex H
END		