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Department of Science & Technology, India

SCOPE OF ACCREDITATION

Laboratory	Indian Rubber Manufacturers Research Association, Thane		
Accreditation Standard	ISO/IEC 17025:2005		
Field	Chemical Testing	Issue Date	23.06.2010
Certificate Number	T-1153	Valid Until	22.06.2012
Last Amended on	-	Page	1 of 6

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
1.	Rubber products and Rubber additives	Determination of Total Sulfur content	ASTM D 297-93(2006), sec-XI	1-25%
2.	Vulcanised and Unvulcanised Rubber compounds	Determination of ash content by direct method and sulfation method	ASTM D 297-93(2006), Sec-35 and Sec-37	0.2-50 %
3.	Crude, Vulcanised, Reclaimed and unvulcanised rubber products	Determination of Percentage of Acetone extract	ASTM D 297-93(2006), Sec-19	1-20 %
4.	Rubber and Rubber like composition	Determination of volume change in liquids	ASTM D 471-06	-10 to +200
5.	Identification of rubber (Isoprene, Chloroprene, Butyl, Styrene butadiene and Acrylonitrile)	Chemical Method	ASTM D 297-93(2006), Sec-52	Qualitative
6.	Identification of rubber	Fourier Transform Infra Red Spectroscopy (FTIR) Acrylic rubber (ACM), Chloropolyethylene (CM), Chlorosulfonylpolyethylene (CSM), Ethylene Propylene-diene Rubber (EPDM), Fluorocarbon rubber (FKM), Poly-chloromethyloxirane (CO), Copolymer of ethylene oxide and chloromethyloxirane (ECO), Polydimethylsiloxane (MQ), Butadiene Rubber (BR),	ASTM-D-3677-00(2004), Part-1, ISO-4650:2005	Qualitative


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		Chloroprene rubber, Isobutene-isoprene rubber (IIR), Bromo-isobutene isoprene rubber (BIIR), Natural Rubber (NR), Isoprene Rubber (IR), Acrylonitrile butadiene Rubber (NBR), Hydrogenated acrylonitrile butadiene rubber (HNBR), Carboxylic acrylonitrile butadiene Rubber (XNBR), Styrene butadiene rubber (SBR), Hydrogenated Styrene-Butadiene Rubber(HSBR), Block copolymer of styrene and butadiene (TPS-SBS), Polystyrene-poly(ethylene-butylene)-polystyrene (TPS-SEBS), Block copolymer of styrene and isoprene (TPS-SIS), Polystyrene - poly(Ethylene-Propylene)-Polystyrene (TPS-SEPS), Syndiotactic poly(1,2 butadiene) TPZ, Copolymer TPE with a soft segment with ester and ether linkages (TPC-EE) and their blends		
7.	Elemental Analysis of Metallic Elements and Pb, Cu, Zn, Mn, Cr, Cd, Hg	Inductively coupled plasma, optical emission spectroscopy (ICP OES)	IRMRA/CHEM/SOP/08	Pb= 1 ppm 9.5 % Cu=1ppm-30ppm, Zn=1ppm-5.5%, Mn=1ppm-30ppm


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8.	Rubber Compounding ingredients (accelerators, antioxidants, sulphur, plastisizer)	Determination of moisture content	IS 7086-1973, part-I, Sec-e, Reaffirmed 2006	1 - 10%
9.	Rubber Compounding ingredients (accelerators, antioxidants, sulphur, plastisizer)	Determination of Melting point	IS-6918-2002, Annex-C, Reaffirmed 2002	60-300°C
10.	Hydrocarbon oils	Determination Flash point	IS-1448-1969, Part 69, Reaffirmed-2003	100 -300°C
11.	Rubber Compounding ingredients (accelerators, antioxidants, sulphur, plastisizer)	Determination of water soluble ingredients	IS 7086-1973, part-I, Sec-F, Reaffirmed 2006	0.1-10 %
12.	Rubber Compounding ingredients (accelerators, antioxidants, sulphur, plastisizer)	Determination of Loss on ignition	IS 7086-1973, part-I, Sec-h, Reaffirmed 2006	1-15%
13.	Rubber Compounds	Fire Retardance Test	IS-3181-1992(O1) (Appendix G) (Reaffirmed 2001)	1-35 sec

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14.	Polysulfide Based Sealants	Application Life a) Difference in depth of the sealant surface (mm) (5 degC/48hrs) b) Time (min) Tack free conditions (R.T./16hrs) The Following test are conducted on assemblies after curing at RT/7days Penetration and Recovery test i) Penetration (mm) (Before aging) ii) Penetration (mm) (After 70 °C/14days) iii) Penetration (mm) Fuel B, RT, 48 Hrs iv) Recovery (%) (before Aging) v) Recovery (%) (After 70 °C/14days) vi) Recovery (%) (After fuel B/RT/48hrs) vii) Mass loss (%) (70 °C/14 Days) viii) Mass change (%) (fuel-B/RT/48hrs)	BS-5212-1990, IS-12118 (Part 1 & 2) ISO 11600 BS-5212-1990, IS-12118 (Part 1 & 2)	Upto 6 mm Min 30 mins Qualitative Upto 10 mm Upto 10 mm Upto 10 mm Upto 99% Upto 99% Upto 99% Upto 10% Upto 10%

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		ix) Flame Resistance Test		Qualitative
		x) Cyclic test		Qualitative
		Elastic Recovery (%)	ISO 11600, ISO 7383	Upto 100 %
		Tensile properties, secant tensile modulus at 23 deg (N/mm ²)	ISO 11600, ISO 8339	Upto 8 N / mm ²
		Tensile Properties at Maintained Extension	ISO 11600/ ISO 8340	Qualitative
		Adhesion / Cohesion Properties at Variable Temperature	ISO 11600/ ISO 9047	Qualitative
		Adhesion / Cohesion Properties After Exposure to Heat and Artificial Light and Water	ISO 11600/ ISO 11431	Qualitative
		Adhesion / cohesion properties at maintained extension after water immersion	ISO 11600/ ISO10590	Qualitative
		Resistance to compression (N/mm ²)	ISO 11600/ ISO 11432	Upto 8 N / mm ²
		Loss of mass %	ISO 11600 / ISO 10563	Upto 20 %
		Resistance to flow	ISO 11600 / ISO 7390	Upto 10 mm


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15.	Compounded and uncompounded Rubber and Plastics	Composition analysis by thermal techniques Low volatile content Polymer content Filler content Ash content Glass Transition Temperature	ASTM E 1131-08 ASTM D 7426-08	 1-90% 1-90% 1-80% 1-60% 30-700°C
16.	Rubber compounding ingredients (Rubber resin)	Softening point of resin	ASTM E 28 99(2009)	30 - 200°C
17.	Rubber products	Elemental analysis -SiO ₂ content of products	ASTM D 297-93(2006),Sec-42	Up 80 %
18.	Rubber product surgical rubber gloves	pH of aqueous extract	IS-4148-1989 (Reaffirmed 2006)	2-14
19.	Rubber products of LPG flexible tubing	Resistance to n- pentane a) Extractable matter b) Absorb matter	IS-10908-1991 with Amendment no 1 & 2	Upto 25% Upto 25 %

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