National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

SCOPE OF ACCREDITATION

Laboratory	**Indian Institute of Packaging, Plot No. E-2, Road No. 8, M.I.D.C. Area, Andheri (East), Mumbai, Maharashtra**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**TC-5875** *(in lieu of T-0687 & T-0688)* **Page 1 of 10**
Validity	**04.06.2017 to 03.06.2019** **Last Amended on 18.05.2018**

CHEMICAL TESTING

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	**PAPER & PULP**			
1.	**Paper, Paperboard & Corrugated Fibre Board**	Ash content	IS 1060	0.01 % to 30 %
		pH	IS 1060	1 to 14
		Moisture content	IS 1060	0.01 % to 20 %
		Water spray test	IS 10212	Qualitative
		Cobb test	IS 1060 & IS 4006	0.01 gsm to 600 gsm
		Grammage / Substance	IS 1060	0.01 gsm to 600 gsm
			IS 7063	0.01 gsm to 600 gsm
		Surface pH	IS 1060	1 to 14
		Gloss	IS 1060 & ASTM D2457	1 % to 95 %
		Brightness	TAPPI T452	1 % to 100 %
		Diffuse opacity (Paper backing)	TAPPI T519	1 % to 100 %
II.	**PLASTICS & RESINS**			
1.	**Plastics & Allied Materials**	Global (or overall) Migration test	IS 9845	0.01 mg/L to 100 mg/L
2.	**Plastic Feeding Bottle**	Ageing resistance	IS 14625	Qualitative
		Product resistance of printed container	IS 2798 & IS 10840	Qualitative
		Permanency of pigment	IS 14625	Qualitative
		Capacity scale	IS 14625	Qualitative
		Transparency	IS 14625	1 % to 100 %
3.	**Plastic Bottle for Mineral Water**	Potability test	IS 15410	Qualitative
		Capacity	IS 2798	1 mL to 30 L
		E.S.C.R	IS 8747	Qualitative
		Gloss	ASTM D2457	0.01 % to 100 %
		Haze	ASTM D1003	1% to 100 %
		Transparency	IS 15410 & ASTM D1003	1 % to 100%

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Gloss	ASTM D2457	1 % to 100%
4.	**BOPP Tapes**	pH	IS 13262	1 to 14
II	**HAZARDOUS & RESTRICTED CHEMICALS**			
1.	**Plastic bottles, films, pouches and containers**	Barium (Ba)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		Cadmium (Cd)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		Chromium (Cr)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		obalt (Co)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		Mercury (Hg)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	5 µg/L to 1000 µg/L
		Selenium (Se)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		Tin (Sn)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Antimony (Sb)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		Arsenic (As)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		Zinc (Zn)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		Lead (Pb)	IS 9845: 1998 (Page no.1-5) & ISO 11885:2007-08-01 (Page no.1-27) ICP-OES	10 µg/L to 1000 µg/L
		BPA monomers	As per EN 14350-2: 2004 CL. 5.5 & Annex. B (Page no. 14, 15 & 19) HPLC	10 µg/L to 1000 µg/L
		Terephthalic acid (TPA) in food stimulants	EN 13130-2: 2004 (Page No.1-14) HPLC	1 mg/L to 100 mg/L
		Di Methyl Phthalate (DMP	IEC 62321-8; Edition 1.0 2017-03 GCMS	10 mg/L to 100 mg/L
		Di Ethyl Phthalate (DEP)	IEC 62321-8; Edition 1.0 2017-03 GCMS	10 mg/L to 100 mg/L
		Di Butyl Phthalate (DBP)	IEC 62321-8; Edition 1.0 2017-03 GCMS	10 mg/L to 100 mg/L
		Benzyl Butyl Phthalate (BBP)	IEC 62321-8; Edition 1.0 2017-03 GCMS	10 mg/L to 100 mg/L
		Di Ethyl Hexyl Phthalate (DEHP)	IEC 62321-8; Edition 1.0 2017-03 GCMS	10 mg/L to 100 mg/L
		Di- N- Octyl Phthalate (DNOP)	IEC 62321-8; Edition 1.0 2017-03 GCMS	10 mg/L to 100 mg/L

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		Diisodecyl phthalate (DIDP)	IEC 62321-8; Edition 1.0 2017-03 GCMS	10 mg/L to 100 mg/L
III.	**METAL PRODUCTS**			
1.	**Tin Containers**	Tin coating	IS 1327	0.5 gsm to 25 gsm
		Lacquer curing test	IS 9992	Qualitative
		Salt spray test	ASTM B117	Qualitative
		Lacquer continuity test	IS 7182	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	MECHANICAL TESTING			
I.	**PAPER & PAPERBOARD PRODUCTS**			
1.	**Paper, Paperboard & Corrugated Fibre Board Boxes**	Thickness	IS 1060	0.005 mm to 1.0 mm
		Bulk	IS 1060	0.02 cc/gm to 20 cc/gm
		Bursting strength	IS 1060	0.5 kg/cm² to 40 kg/cm²
		Bursting factor	IS 1060	Qualitative
		Burst index	IS 1060 & IS 1397	0.5 to 50 kPa.m^2 / g
		Ring crush test	IS 4006	0.01 kgf to 1000 kgf
		Folding endurance	IS 1060	1 to 10000 No.
		Breaking length	IS 1060	1 m to 7000 m
		Tensile strength & elongation	IS 1060	1 kgf to 5000 kgf
		Tensile index	IS 1060	0.10 Nm/g to 50 Nm/g
		Tear index	IS 1060 & IS 1397	0.10 mNm²/g to 50 mNm²/g
		Edge crush test	IS 7063	0.01 kgf to 1000 kgf
		Flat crush test	TAPPI T808 om-01	0.01 kgf to 1000 kgf
		Tear strength	IS 1060	0.01 gf to 1600 gf
		Tear factor	IS 1060	Qualitative
		Smoothness	IS 9894	5 mL/min to 3000 mL/min
		Porosity	IS 11080	5 mL/min to 3000 mL/sec.
		Abrasion loss (Scuff proofness)	IS 4006	1 mg to 100 mg per 1000 rev.
		Wax pick up number	IS 1060	2A to 26A
		Blocking resistance	IS 4006	Qualitative
		Bending stiffness index	IS 6956	0.0001 gf to 200 gf
		Grammage of coating	IS 1551 & IS 3450	0.1 g/m² to 200 g/m²
		Durability	IS 1551 & IS 3450	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Fibre analysis (Preliminary test)	IS 5285	Qualitative
		Manifolding	IS 1551 & IS 3450	Qualitative
		Mass of ream	IS 1848	upto 200 kg
2.	**Corrugated Fibre Board Boxes & Wooden Boxes**	Internal dimensions	IS 2771	0.5 mm to 1000 mm
		Combined internal dimensions (L+W+H)	IS 2771	0.5 mm to 1000 mm
		No of plies	IS 2771	Qualitative
		Style of box	IS 6481	Qualitative
		Type of flute	IS 2771	Qualitative
		Compression strength	IS 7028	1 kgf to 5000 kgf
		Vibration test	IS 7028	Frequency: 120 to 220 rpm
		Inclined impact test	IS 7028	Qualitative
		Rolling test	IS 7028	Qualitative
		Drop test	IS 7028	Qualitative
		Stack load test	IS 7028	Qualitative
II.	**PLASTICS & RUBBER**			
1.	**Plastics & Allied Materials**	Thickness	IS 2508	5 microns to 1000 microns
		Heat seal strength	ASTM F88	0.01 kgf to 100 kgf
		Melt flow index	ASTM D1238	0.01 to 100 gm/10 min
		Modulus of elasticity	ASTM D882	10 kg/cm^2 to 1000 kg/cm^2
		Tensile strength / Breaking load	IS 2508	0.01 kg/cm^2 to 1000 kg/cm^2 0.01 kg to 1000 kg
		Elongation at break	IS 2508	0.01% to 1000 %
		Dart impact test	IS 2508	5 to 2500 gf
		Oxygen transmission rate (OTR) test	ASTM D3985	0.005 mL/m²/day to 1000 mL/m²/day

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Co-efficient of friction (static & dynamic)	ASTM D1894	0.01 N to 10 N
		Water vapour transmission rate (WVTR) test	ASTM F1249	0.005 g/m^2/day to 1000 g/m^2/day
		Yield test	IS 2508	Upto 10,00,000 cm^2 /kg
		Vibration leakage test	IS 15609	Qualitative
		Water potability test	IS 15609	Qualitative
		Stack load test	IS 15609	Qualitative
		Drop test	IS 15609	Qualitative
		Ink adhesion test	IS 15609	Qualitative
		Product resistance test	IS 15609	Qualitative
2.	**Blow Moulded Plastics Containers**	Thickness	IS 2798	0.01 mm to 25 mm
		Handle strength	IS 6312	Qualitative
		Leak proofness test (by air pressure)	IMDG Code, Vol.1	35 kPa to 300 kPa
		Hydrostatic pressure test	IS 6312	35 kPa to 300 kPa
		Drop test	IS 2798	Qualitative
		Ink adhesion of printed containers	IS 2798 & IS 10840	Qualitative
		Brimful capacity	IS 2798 & IS 6312	Up to 50 L
		Effectiveness of Closure	IS 6312	Qualitative
		E.S.C.R.	IS 8747 & IS 6312	Qualitative
		Closure leakage test	IS 2798 & IS 7959	Qualitative
		Drop test	IS 6312	0.5 mtr. to 1.8 mtr.
3.	**HDPE Bags / Geomembranes**	fiber thickness of individual thread	IS 7703	500 Denier to 5000 Denier
		Breaking strength	IS 1969	0.01 kgf to 2500 kgf
		Mesh	IS 1963	1 to 100
		Seam strength	IS 9030	0.01 kgf to 500 kgf
		Count of stitches of seam	IS 11652	14 ± 2 / dm
		Dimension	IS 11652	1 mm to 1000 mm
		Mass	IS 1964	0 to 1200 g/m^2
		Puncture resistance	IS 15351	0.1 KN to 50 KN
		Water repellency	IS 7941	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Resistance to ageing	IS 7016	Qualitative
		Ends per dm / Picks per dm	IS 1963	Qualitative
		Dimension	IS 1954	0 to 5 mtr
		Ash content	IS 14252	0.01% to10 %
		Carbon black content	IS 2530	Max. 2.2 %
		Ball burst	IS 7016	2 at 60 N/cm^2
		Hydrostatic pressure test	IS 15351	upto 35 kg/cm^2
4.	**Plastic Caps & Closures**	Torque test	ASTM D3198	0.01 Nm to 10 Nm
		Compressibility for cork composition sheet	IS 4253	1 to 1000 gf
		Recovery of cork for composition sheet	IS 4253	1 % to 100 %
5.	**BOPP Tapes**	Adhesion strength of pressure (sensitive adhesive tape to metal)	IS 8402	0.01 kgf to 500 kgf
		Adhesion strength of pressure (sensitive tape to self)	IS 8402	0.01 kgf to 500 kgf
		Anchorage of adhesives in pressure (sensitive cellulose tapes)	IS 8402	Qualitative
		Determination of stability of pressure sensitive tapes	IS 8402	Qualitative
6.	**Plastic Feeding Bottle**	Dimension of Neck	IS 14625	1 mm to 25 mm
		Drop test	IS 14625	Qualitative
		Leakage test	IS 14625	Qualitative
		Compressive deformation	IS 14625	0 to 90 %
		Observation	IS 14625	Qualitative
7.	**Plastic Pallet**	Bending test	IS 6219	0.01 kgf to 15,000 kgf
		Corner drop test	IS 6219	Qualitative
		Stacking test	IS 6219	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
8.	Flexible Intermediate Bulk Containers (FIBC)	Top lift test	IMDG Code, Vol. 1	Qualitative
		Tear test	IMDG Code, Vol. 1	Qualitative
		Stacking test	IMDG Code, Vol. & IS 14738	Qualitative
		Drop test	IMDG Code, Vol. 1	Qualitative
		Topple test	IMDG Code, Vol. 1	Qualitative
		Righting test	IMDG Code, Vol. 1	Qualitative
		Cyclic test & load to failure	IS 14738	Qualitative
		Compression test / Stacking test	IS 14738	1 kgf to 10000 kgf
		Dimension	IS 11652	1 mm to 3000 mm
III.	WOOD AND WOOD PRODUCTS			
1.	Wooden Boxes	Internal dimensions	IS 2771	0.5 mm to 1000 mm
		Combined internal dimensions (L+W+H)	IS 2771	0.5 mm to 1000 mm
		Compression Strength	IS 7028	1 kgf to 10000 kgf
		Vibration test	IS 7028	Frequency: 120 to 220 rpm
		Inclined impact test	IS 7028	Qualitative
		Rolling test	IS 7028	Qualitative
		Drop test	IS 7028	Qualitative
		Stack load test	IS 7028	Qualitative
2.	Wooden Pallet	Bending test	IS 6219	0.01 kgf to 15,000 kgf
		Corner drop test	IS 6219	Qualitative
		Stacking test	IS 6219	Qualitative

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IV.	**METAL PRODUCTS**			
1.	**Tin Containers**	Handle pull test	IS 2471	Qualitative
		Dimension	IS 9992, IS 10325 & IS 10339	0.5 mm to 1000 mm
		Leakage test (air pressure)	IS 9992, IS 10325 & IS 10339	Qualitative
		Hydraulic pressure test	IS 10325 & IS 10339	Qualitative
2.	**Metal Drum**	Leakage test (air pressure)	IS 1783	Qualitative
		Hydraulic pressure test	IS 1783	Qualitative
		Drop test	IS 1783	Qualitative
		Seam width	IS 1783	0.05 mm to 1000 mm
		Thickness	IS 1783	0.01 mm to 25 mm
		Dimension	IS 1783	0.5 mm to 1000 mm
		Diameter of closure	IS 1783	0.05 mm to 25 mm

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