

<b>Laboratory</b>	<b>ITL Labs Private Limited, B-283, 284, Mangol Puri Industrial Area, Phase-1, Delhi</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Mechanical Testing</b>	<b>Issue Date</b>	<b>24.01.2015</b>
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<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
<b>I. MECHANICAL PROPERTIES OF MATERIALS</b>				
<b>1.</b>	<b>Steel &amp; Steel alloy (Rod, Dumb bell, Sheet, Channel, Angle, Ail, Square, Tabular, Tor, TMT, Cast Iron, Copper &amp; Copper Alloy Aluminum &amp; Aluminum Alloy, Steel Tubes)</b>	Tensile Strength	IS 1608: 2005 ( RA 2010)	10 N/mm <sup>2</sup> to 700 N/mm <sup>2</sup>
		Yield Stress	IS 1608: 2005 ( RA 2010)	10 N/mm <sup>2</sup> to 700 N/mm <sup>2</sup>
		Elongation	IS 1608: 2005 ( RA 2010)	0.1 % to 40.0 %
		Bend Test	IS 1599: 1985 ( RA 2010)	Qualitative
		Dimensions	IS 2062: 2011 IS 737: 2008 IS 320: 1980 (RA 2006) IS 617: 1994 (RA 2010) IS 808: 1989 (RA 2009) IS 1852: 1985 (RA 2008) IS 1161: 1998 (RA 2009) IS 1239 (Part 1): 2004 (RA 2010) IS 1239 (Part 2): 2004 (RA 2010) IS 3589: 2001 (RA 2006) IS 4270: 2001 (RA 2006) IS 3601: 2006 IS 9295: 1983 (RA 2009) IS 1786: 2008	0.1 mm to 300 mm
<b>2.</b>	<b>Structural Steel</b>	Izod impact test	IS 1598: 1985 ( RA 2009)	10 J to 75 J
		Charpy Impact test	IS 1757: 1988 ( RA 2009) EN 100045/ASTM E23/ISO 148-1	10 J to 75 J
<b>3.</b>	<b>HSD Steel Bar</b>	Re Bend Test	IS 1786: 2008	Qualitative
<b>4.</b>	<b>Steel Tubes</b>	Flattening Test	IS 2328: 2005 (RA 2010)	Qualitative

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<b>II. BUILDING MATERIALS</b>				
<b>1.</b>	<b>Concrete</b>	Compressive Strength	IS 516: 1959 ( RA 2008)	10 N/mm <sup>2</sup> to 70 N/mm <sup>2</sup>
<b>2.</b>	<b>Fine Aggregate</b>	Size and Grading	IS 2386 (Part 1): 1963 (RA 2011)	75 micron to 10 mm
		Deleterious Materials	IS 2386 (Part 1 & 2): 1963 (RA 2011)	0 to 5 %
		Coal and Lignite		0 to 5 %
		Clay Lumps		0.1 % to 10 %
		Materials finer than 75 micron		0 to 2 %
		IS Sieve		
		Shale		
		Specific Gravity	IS 2386 (Part 3): 1963(RA 2011)	1.5 to 3.0
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2011)	0.2 % to 5.0 %
		Bulk Density	IS 2386 (Part 3): 1963 (RA 2011)	1.0 Kg/L to 3.0 Kg/L
		Soundness (Na <sub>2</sub> SO <sub>4</sub> )	IS 2386 (Part 4): 1963 (RA 2011)	1 % to 25 %
<b>3.</b>	<b>Coarse Aggregate</b>	Size and Grading	IS 2386 (Part 1): 1963 (RA 2011)	10 mm to 63 mm
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2011)	0.2 % to 5 %
		Specific Gravity	IS 2386 (Part 3): 1963 ( RA 2011)	1.5 to 3.0
		Deleterious Materials	IS 2386 (Part 2): 1963 (RA 2011)	0 to 5 %
		Coal and Lignite		0 to 5 %
		Clay Lumps		0.1 % to 10 %
		Materials finer than 75 micron IS Sieve		
		Bulk Density	IS 2386 (Part 3): 1963 (RA 2011)	1.0 Kg/L to 2.0 Kg/L

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	<b>Coarse Aggregate</b>	Elongation Index	IS 2386 (Part 1): 1963 (RA 2011)	5 % to 40 %
		Flakiness Index	IS 2386 (Part 1): 1963 (RA 2011)	5 % to 40 %
		Soundness (Na <sub>2</sub> SO <sub>4</sub> )	IS 2386 (Part 5): 1963 (RA 2011)	1 % to 25 %
		Abrasion Value	IS 2386 (Part 4): 1963 (RA 2011)	5 % to 55 %
		Crushing Value	IS 2386 (Part 4): 1963 (RA 2011)	5 % to 50 %
		Impact Value	IS 2386 (Part 4): 1963 (RA 2011)	5 % to 50 %
		Stripping Value	IS 6241: 1971 ( RA 2008)	Qualitative
<b>4.</b>	<b>Burnt Clay Brick, Pulverized Fuel ash lime Bricks, Burnt Clay fly Ash Bricks</b>	<b>Dimensions</b> Height Length Width	IS 1077: 1992 (RA 2011) IS 12894: 2002 (RA 2012) IS 13757: 1993 (RA 2011)	1200 mm to 1600 mm 4500 mm to 4800 mm 2000 mm to 2500 mm
		Water Absorption	IS 3495 (Part 2): 1992 (RA 2011)	1 % to 60 %
		Compressive Strength	IS 3495 (Part 1): 1992 (RA 2011)	5 N/mm <sup>2</sup> to 40 N/mm <sup>2</sup>
		Efflorescence	IS 3495 (Part 3): 1992 (RA 2011)	Qualitative
<b>5.</b>	<b>Ordinary Portland Cement (33, 43 &amp; 53 Grade) Portland Pozzolana Cement</b>	Fineness (By Blaines air Permeability)	IS 4031 (Part 2): 1999 (RA 2013)	100 m <sup>2</sup> /kg to 500 m <sup>2</sup> /kg
		Soundness	IS 4031 (Part 3) : 1988 (RA 2013)	0.5 mm to 15 mm
		Le Chatelier Expansion	IS 4031 (Part 3): 1988 (RA 2013)	0.01 % to 3.0 %
		Autoclave Expansion	IS 4031 (Part 3): 1988 (RA 2013)	0.01 % to 3.0 %
		Consistency	IS 4031 (Part 4): 1988 (RA 2013)	15 % to 50 %

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	<b>Ordinary Portland Cement (33, 43 &amp; 53 Grade) Portland Pozzolana Cement</b>	Setting time	IS 4031 (Part 5): 1988 (RA 2013)	
		Initial		5 minutes to 200 minutes
		Final		30 minutes to 600 minutes
		Compressive Strength		
		3 day's	IS 4031 (Part 6): 1988 (RA 2013)	10 N/mm <sup>2</sup> to 70 N/mm <sup>2</sup>
		7 day's		
		28 day's		
		Drying Shrinkage	IS 4031 (Part 10): 1988 (RA 2013)	0.02 % to 4.0%
<b>6.</b>	<b>Precast Concrete Block for Paving</b>	Compressive Strength	IS 15658: 2006 ( RA 2011)	10 N/mm <sup>2</sup> to 80 N/mm <sup>2</sup>
		Water Absorption	IS 15658: 2006 ( RA 2011)	1 % to 10 %
<b>7.</b>	<b>Bituminous Products</b>	Softening point	IS 1205: 1978 ( RA 2009)	15 °C to 80 °C
		Penetration	IS 1203: 1978 ( RA 2009)	1 mm to 40 mm
		Ductility	IS 1208: 1978 ( RA 2009)	50 mm to 1000 mm
<b>8.</b>	<b>Hard Wood</b>	Moisture Content	IS 287: 1993 (RA 2012) IS 1708 (Part 1): 1986 (RA 2010) IS 11215: 1991 (RA 2010)	0.5 % to 25 %
		Density	IS 1708 (Part 2) : 1986 (RA 2010)	100 kg/m <sup>3</sup> to 1100 kg/m <sup>3</sup>
<b>9.</b>	<b>Block Board</b>	Resistance to water	IS 1659: 2004 (RA 2009) Annexure-F	Qualitative
		Adhesion of plies	IS 1659 : 2004 (RA 2009) Annexure-G	Qualitative

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10.	Plywood	Water Resistance test (Adhesion of plies) Moisture Content	IS 1734 (Part 5): 1983 (RA 2008) IS 1734 (Part 1): 1983 (RA 2003)	Qualitative 0.5 % to 25 %
<b>III.</b>	<b>PLASTICS, RUBBER AND LEATHER</b>			
1.	Plastics Bottles/ Containers for Packaged Natural Mineral Water and Packaged Drinking Water	Nominal Capacity Brimful Capacity Wall thickness Transparency	IS 2798: 1998 (RA 2009) IS 2798: 1998 (RA 2009) IS 2798: 1998 (RA 2009) IS 15410: 2003 (RA 2009) Annexure-A	100 mL to 25 liters 100 mL to 25 liters 0.01 mm to 10 mm 1 % to 100 %
		<b>Leakage test</b>		
		Closure leakage	IS 2798: 1998 (RA 2009)	Qualitative
		Vibration leakage	IS 2798: 1998 (RA 2009)	Qualitative
		Air pressure leakage	IS 2798: 1998 (RA 2009)	Qualitative
		Drop Test	IS 2798: 1998 (RA 2009)	Qualitative
2.	Polyethylene Flexible Pouches for the Packing of Natural Mineral Water and Packaged Drinking Water	Description Odour Thickness Width Tensile strength	IS 15609: 2005 (RA 2010) IS 15609: 2005 (RA 2010) IS 2508: 1984 (RA 2008) IS 15609: 2005 (RA 2010) IS 2508: 1984 (RA 2008) Appendix A-4	Qualitative Qualitative 1 µm to 90 µm 25 mm to 800 mm 10 kg/cm <sup>2</sup> to 400 kg/cm <sup>2</sup>

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	<b>Polyethylene Flexible Pouches for the Packing of Natural Mineral Water and Packaged Drinking Water</b>	Elongation at break	IS 2508: 1984 (RA 2008) Appendix A-4	1 % to 1000 %
		Dart impact resistance	IS 2508: 1984 (RA 2008) Appendix A-6	5 gF to 400 gF
		Vibration leakage test	IS 15609: 2005 (RA 2010) Annexure-D	Qualitative
		Stack load test	IS 15609: 2005 (RA 2010) Annexure-F	Qualitative
		Drop test	IS 15609: 2005 (RA 2010) Annexure-G	Qualitative
		Ink adhesion test for printed pouch	IS 15609: 2005 (RA 2010) Annexure-H	Qualitative
<b>3.</b>	<b>Plastic Feeding Bottle</b>	Product resistance test for printed pouch	IS 15609: 2005 (RA 2010) Annexure-J	Qualitative
		Capacity	IS 14625: 1999 (RA 2010)	100 mL to 500 mL
		Transparency	IS 14625: 1999 (RA 2010) Annexure-B	1.0 % to 100 %
		Leakage test	IS 14625: 1999 (RA 2010)	Qualitative
		Drop test	IS 14625: 1999 (RA 2010) Annexure-C	Qualitative
		Ageing resistance	IS 14625: 1999 ( RA 2010)	Qualitative

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	Plastic Feeding Bottle	Compressive deformation resistance	IS 14625: 1999 (RA 2010) Annexure-D	Qualitative
		Product resistance of printed container	IS 2798: 1998 (RA 2009)	Qualitative
-X-X-X-X-X-X-X-X-X-X-X-X-				