

Laboratory	Geo Test House- A Division of Geo Designs & Research Pvt. Ltd., B-10, Krishna Industrial Estate, Vadodara, Gujarat		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	28.05.2015
Certificate Number	T-1941	Valid Until	27.05.2017
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	BUILDING MATERIALS			
1.	Steel (Reinforced & Structural)	Ultimate Tensile Stress	IS 1608: 2005 (RA 2013)	160 N/mm ² to 900 N/mm ²
		0.2% Proof stress	IS 1608: 2005 (RA 2013)	100 N/mm ² to 800 N/mm ²
		Elongation	IS 1608: 2005 (RA 2013)	8 % to 40 %
		Mass per Meter	IS 1608: 2005 (RA 2013)	0.1 kg/m to 15 kg/m
		Bend Test Fe 415, Fe 500	IS 1599: 1985 (RA 1996)	Mandrel dia. : (24,30, 36, 40,48,60,64,80, 100, 125, 128,144,160, 180, 200) mm
		Rebend Test Fe 415, Fe 500	IS 1786: 2008 (RA 2013)	Mandrel dia. : (40,50,84, 112,140,175,224) mm
2.	Pozzolana/ Pulverised Fuel Ash	Standard Consistency	IS 1727: 1967 (RA 2013)	15 % to 45 %
		Initial Setting Time	IS 1727: 1967 (RA 2013)	60 Minutes to 300 Minutes
		Final Setting Time	IS 1727: 1967 (RA 2013)	150 Minutes to 700 Minutes
		Fineness by sieving	IS 1727: 1967 (RA 2013)	10 % to 90 %
		Fineness by Blain's Air Permeability	IS 1727: 1967 (RA 2013)	100 m ² /kg to 450 m ² /kg
		Soundness expansion by Le-chatlier	IS 1727: 1967 (RA 2013)	1 mm to 20 mm

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	Pozzolana/ Pulverised Fuel Ash	Lime Reactivity	IS 1727: 1967 (RA 2013)	1 N/mm ² to 10 N/mm ²
		Compressive Strength	IS 1727: 1967 (RA 2013)	10 N/mm ² to 55 N/mm ²
		Specific Gravity	IS 1727: 1967 (RA 2013)	0.5 to 3
3.	Cement	Standard Consistency	IS 4031 (Part 4): 1988 (RA 2014)	15 % to 45 %
		Initial Setting Time	IS 4031 (Part 5): 1988 (RA 2014)	10 Minutes to 300 Minutes
		Final Setting Time	IS 4031 (Part 5): 1988 (RA 2014)	150 Minutes to 700 Minutes
		Fineness by Blain's Air Permeability	IS 4031 (Part 2): 1999 (RA 2013)	150 m ² /kg to 450 m ² /kg
		Soundness expansion by Lechatlier	IS 4031 (Part 3): 1988 (RA 2014)	0.5 mm to 20 mm
		Density	IS 4031 (Part 11): 1988 (RA 2014)	2.5 g/cm ³ to 3.5 g/cm ³
		Compressive Strength	IS 4031 (Part 6): 1988 (RA 2014)	10 N/mm ² to 70 N/mm ²
4.	Aggregates (Coarse)	Sieve Analysis	IS 2386 (Part 1): 1963 (RA 2011)	80 mm to 10 mm
		Impact Value	IS 2386 (Part 4): 1963 (RA 2011) Cl. 4.0	5 % to 60 %
		10 % Fine Value	IS 2386 (Part 4): 1963 (RA 2011) Cl. 4.0	50 kN to 400 kN

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Aggregates (Coarse)	Crushing Value	IS 2386 (Part 4): 1963 (RA 2011) Cl. 2.0	5 % to 60 %
		Specific Gravity	IS 2386 (Part 3): 1963 (RA 2011)	1.5 to 3.5
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2011)	0.5 % to 10 %
		Flakiness Index	IS 2386 (Part 1): 1963 (RA 2011)	5 % to 70 %
		Elongation Index	IS 2386 (Part 1): 1963 (RA 2011)	5 % to 70 %
		Abrasion by Los Angeles Machine	IS 2386 (Part 4): 1963 (RA 2011) Cl. 2.0	5 % to 60 %
5.	Aggregates (Fine)	Sieve Analysis	IS 2386 (Part 1): 1963 (RA 2011)	10 mm to 75 micron
		Specific Gravity	IS 2386 (Part 3): 1963 (RA 2011)	1.5 to 3.5
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2011)	1 % to 10 %
6.	Bricks (Burnt clay Building & Fly ash Bricks)	Compressive Strength	IS 3495 (Part 1): 1992 (RA 2011)	2.0 N/mm ² to 15 N/mm ²
		Water Absorption	IS 3495 (Part 2): 1992 (RA 2011)	5 % to 30 %
		Dimensions	IS 1077: 1992 (RA 2011)	L: 2000 mm to 5000 mm W: 1600 mm to 2500 mm H: 1200 mm to 2300 mm

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7.	Ceramic Tiles / Vitrified Tiles	Water Absorption	IS 13630 (Part 2): 2006 (RA 2012)	1 % to 20 %
		Modulus of Rupture	IS 13630 (Part 6): 2006 (RA 2012)	5 N/mm ² to 60 N/mm ²
8.	Precast Concrete Blocks for Paving	Water Absorption	IS 15658: 2006 (RA 2011)	1 % to 20 %
		Compressive Strength	IS 15658: 2006 (RA 2011)	10 N/mm ² to 70 N/mm ²
9.	Autoclaved Cellular (Aerated) Concrete Blocks	Dimensions	IS 2185 (Part 3): 1984 (RA 2010)	L: 100 mm to 700 mm W: 100 mm to 700 mm H: 100 mm to 300 mm
		Compressive Strength	IS 2185 (Part 3): 1984 (RA 2010)	0.5 N/mm ² to 10 N/mm ²
		Block Density	IS 2185 (Part 3): 1984 (RA 2010)	100 kg/m ³ to 2000 kg/m ³
10.	Concrete Blocks (Solid/Hollow)	Dimensions	IS 2185 (Part 1): 2005 (RA 2010) IS 2185 (Part 2): 1983 (RA 2010)	L: 100 mm to 700 mm W: 100 mm to 700 mm H: 100 mm to 300 mm
		Compressive Strength	IS 2185 (Part 1): 2005 (RA 2010) IS 2185 (Part 2): 1983 (RA 2010)	1 N/mm ² to 15 N/mm ²
		Water Absorption	IS 2185 (Part 1): 2005 (RA 2010) IS 2185 (Part 2): 1983 (RA 2010)	1 % to 15 %
		Block Density	IS 2185 (Part 1): 2005 (RA 2010) IS 2185 (Part 2): 1983 (RA 2010)	1000 kg/m ³ to 2500 kg/m ³
11.	Timber	Moisture Content	IS 11215: 1991 (RA 2010)	1 % to 20 %

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12.	Wood/Plywood	Moisture Content	IS 11215: 1991 (RA 2010)	1 % to 20 %
		Glue Adhesion Test	IS 4020 (Part 15): 1998 (RA 2013)	Qualitative (Visual Assessment)
		End Immersion Test	IS 4020 (Part 13): 1998 (RA 2013)	Qualitative (Visual Assessment)
		Knife Test	IS 4020 (Part 14) : 1998 (RA 2013)	Qualitative (Visual Assessment)
13.	Concrete (Harden)	Compressive Strength	IS 516: 1959 (RA 2013)	5 N/mm ² to 80 N/mm ²
14.	Concrete (Fresh)	Workability(Slump test)	IS 1199: 1959 (RA 2013)	1 mm to 250 mm
15.	Bitumen	Penetration Test	IS 1203: 1978 (RA 1998)	30 to 100
		Softening Point	IS 1205: 1978 (RA 1998)	10 °C to 60 °C
		Ductility	IS 1208: 1978 (RA 1998)	10 cm to 100 cm
16.	Bituminous Mix	Marshall Stability	ASTM D1559-89/ AASHTO T245-94	1 kN to 30 kN
		Flow	ASTM D1559-89/ AASHTO T245-94	1 mm to 25 mm
17.	Rock	Uniaxial Compressive Strength	IS 9143: 1979 (RA 2011)	5 N/mm ² to 100 N/mm ²
		Point load Strength Index of Rock	IS 8764: 1998 (RA 2014)	1 N/mm ² to 50 N/mm ²

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	Rock	Water Content of Rock	IS 13030: 1991 (RA 2011)	0.5 % to 20 %
18.	Soil	Moisture Content	IS 2720 (Part 2): 1973 (RA 2010)	5 % to 50 %
		Specific Gravity	IS 2720 (Part 3): 1980(RA 2011)	1.0 to 3.0
		Sieve Analysis	IS 2720 (Part 4): 1985 (RA 2010)	4.75 mm to 75 micron
		Liquid Limit	IS 2720 (Part 5): 1985 (RA 2010)	15 % to 400 %
		Plastic Limit	IS 2720 (Part 5): 1985 (RA 2010)	10 % to 200 %
		Light Compaction	IS 2720 (Part 7): 1980 (RA 2011)	MDD: 1 g/cc to 3 g/cc OMC: 5 % to 30 %
		Heavy Compaction	IS 2720 (Part 8): 1983 (RA 2010)	MDD: 1.5 g/cc to 3 g/cc OMC: 5 % to 25 %
		Unconfined Compression Test	IS 2720 (Part 10): 1991 (RA 2010)	0.05 N/mm ² to 8 N/mm ²
		California Bearing Ratio	IS 2720 (Part 16): 1987 (RA 2011)	1 % to 80 %

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