

Laboratory	CSRL - Structwel Lab (Pune) Private Limited, 54, Progress House, Mumbai-Pune Road, Shivaji Nagar, Pune, Maharashtra		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	24.05.2014
Certificate Number	T-1703	Valid Until	23.05.2016
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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
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I. BUILDING MATERIALS

1. Cement 33 Grade, 43 Grade, 53 Grade, PSC, PPC	Loss on Ignition	IS 4032-1985, Reaffirmed Jul 2009, Amd.2	1 % to 1.5 %
	SiO ₂		10 % to 50 %
	Fe ₂ O ₃		1 % to 10 %
	Al ₂ O ₃		1 % to 10 %
	CaO		10 % to 70 %
	MgO		1 % to 10 %
	Sulphur as SO ₃		1 % to 5 %
	Insoluble Residue		5 % to 5 %
2. Fly Ash	Chlorides		0.01 % to 1 %
	Loss on ignition	IS 1727 : 1967, Reaffirmed Oct 2008, Amd.2	0.1 % to 5 %
	SiO ₂	IS 3812 (Part 1 & 2)- 2003	25 % to 75 %
	Combined Alumina and Ferric Oxide		10 % to 40 %
	CaO		1 % to 15 %
	MgO		1 % to 10 %
	Sulphuric Anhydride		1 % to 5 %
Chlorides		0.005 % to 1 %	

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3.	Admixture	pH	IS 9103-1999, Reaffirmed Oct 2008, Amd. 2	1 to 12	
		Ash Content		1 % to 20 %	
		Dry Material Content		5 % to 60 %	
		Relative Density		1 g/cc to 2 g/cc	
		Chlorides		IS 6925-1973, Reaffirmed Oct 2008	0.001 % to 5 %
4.	Sand and Aggregate	Estimation of Deleterious Materials	IS 2386 (Part 1), IS 2386 (Part 2)- 1963, Reaffirmed Apr 2011, Amd.4	0.1 % to 15 %	
		Organic Impurities		Visual	
		Soundness by Sodium sulphate & Magnesium sulphate		IS 2386 (Part 5)- 1963, Reaffirmed Apr 2011	1 % to 20 %
		Alkali aggregate reactivity: a) Dissolved silica		IS 2386 (Part 7)- 1963, Reaffirmed Apr-2011, Amd.2	1 mmol/l to 2500 mmol/l 0 to 700 mmol/l
		b) Reduction in alkalinity			
5.	Glazed Ceramic Tiles	Determination of Chemical Resistance -Glazed Tiles	IS 13630 (Part 8)- 1993	Visual	
		a) Stains			
		b) Household Chemicals			
		c) Swimming Pool Salts			
		d) Acids			
		e) Alkalis			

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6.	Lime	Insoluble residue in dilute acid and alkali	IS 6932 (Part 1)- 1973, Reaffirmed May 2009, Amd.3	1 % to 20 %
		Loss on ignition		5 % to 30 %
		Insoluble residue in Hydrochloric acid		1 % to 20 %
		SiO ₂		0.5 % to 30 %
		Combined Alumina and Ferric Oxide		5 % to 10 %
		CaO		0.5 % to 70 %
		MgO		0.1 % to 20 %
7.	Mineral Gypsum	Free Water	IS 1288-1982, Clause: 4	0.5 % to 10 %
		Combined Water	IS 1288-1982, Clause: 6	0.5 % to 10 %
		Silica & Acid Insoluble	IS 1288-1982, Clause: 8	0.2 % to 5 %
		Iron & Aluminium Oxides	IS 1288-1982, Clause: 9	1 % to 10 %
		Calcium Oxide (CaO)	IS 1288-1982, Clause: 10.2	10 % to 50 %
		Magnesium Oxide (MgO)	IS 1288-1982, Clause: 11.2	1 % to 10 %
		Sulphur trioxide (SO ₃)	IS 1288-1982, Clause: 12	10 % to 50 %

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8.	Plywood	pH Value	IS 1734 (Part 1)- 1983, Reaffirmed Feb 2013	1 to 10
9.	Gypsum Plaster	SO ₃	IS 1288-1982, Clause: 12	10 % to 50 % by mass
		CaO	IS 1288-1982, Clause: 10.2	10 % to 50 % by mass
		Soluble Magnesium Salt, expressed as % of MgO	IS 2547 (Part I)- 1976, (App-A) Reaffirmed Jan 2012, Amd.3	0.5 % to 3 %
		Loss on Ignition	IS 2547 (Part I)- 1976, (App-B), Reaffirmed Jan 2012, Amd.3	0.5 % to 10 %
		Free Lime	IS 2547 (Part I)- 1976, (App-C), Reaffirmed Jan 2012, Amd.3	0.2 % to 10 %
10.	Soil	pH Value	IS 2720 (Part 26)- 1987, Reaffirmed Dec 2011	1 to 10
		Total Soluble Solids	IS 2720 (Part 21)- 1977, Reaffirmed May 2010, Amd.1	0.01 % to 10 %
		Total Soluble Sulphates	IS 2720 (Part 27)- 1977, Reaffirmed May 2010	0.005 % to 50 %
		Calcium Carbonate	IS 2720 (Part 23)- 1976,	5 % to 30 %
		Organic Matter	IS 2720 (Part 22)- 1972, Reaffirmed May 2010, Amd.1	0.05 % to 5 %

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II. METALS AND ALLOYS				
1.	Steel	Carbon	IS 228 (Part 1)- 1987	0.01 % to 1.5 %
		Sulphur	IS 228 (Part 9)- 1989	0.01 % to 0.2 %
		Phosphorus	IS 228 (Part 3)- 1987	0.01 % to 0.2 %
III. WATER				
1.	Water for Construction Propose	pH Value	IS 3025 (Part 11)- 1983	1 to 12
		Total Suspended Solids	IS 3025 (Part 17)- 1984	1 mg/l to 1000 mg/l
		Volatile and Fixed Residue (Organic & Inorganic Residue)	IS 3025 (Part 18)- 1984	1 mg/l to 1000 mg/l
		Alkalinity	IS 3025 (Part 23)- 1986	1 ml to 100 ml
		Sulphates	IS 3025 (Part 24)- 1986	5mg/l to 2000 mg/l
		Total Hardness	IS 3025 (Part 21)- 2009	10 mg/l to 10000 mg/l
		Chloride	IS 3025 (Part 32)- 1988	10 mg/l to 2000 mg/l
		Total Dissolved Solids	IS 3025 (Part 16)- 1984	1 mg/l to 1000 mg/l
	Acidity	IS 3025 (Part 22)- 1986	0.5 ml to 10 ml	

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