

Laboratory	Independent Testing Laboratories, National Council for Cement and Building Materials, NCB Bhavan, Old Bombay Road, Hyderabad, Telangana		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	26.08.2014
Certificate Number	T-0954	Valid Until	25.08.2016
Last Amended on	-	Page	1 of 4

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. BUILDINGS MATERIALS

1.	Cement	Consistency	IS 4031 (Part-4)-1988 RA 2009	20 to 40%
		Density	IS 4031 (Part-11)-1988 RA 2009	2 g/cc to 4 g/cc
		Compressive strength	IS 4031 (Part-6)-1988 RA 2009 Amendment 3	10 to 90 MPa
		Setting time:		
		a)Initial Setting time	IS 4031 (Part-5)-1988 RA 2009 Amendment 1	10 min to 600 min
		b)Final Setting time		30 min to 600 min
		Fineness – Blaines	IS 4031 (Part-2)-1999 RA 2008 Amendment 1	150 m ² /kg to 600 m ² /kg
		Soundness:		
		a) Lechaterlier Expn	IS 4031 (Part-3)-1988 RA 2009	0 to 20 mm
		b) Autoclave Expn		-0.01 to +2
		Drying shrinkage	IS 4031 (Part-10)-1988 RA 2009	0.01 to 1%
		Sulphate expansion	IS 12330-1988 RA 2009 Amendment 6	0.001 to 4%
		Heat of hydration	IS 4031 (Part-9)-1988 RA 2009	50 KJ/kg to 700 KJ/kg

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Last Amended on	-	Page	2 of 4

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	Cement	Degree of Whiteness	IS 8042-1989 Annexure-B RA 2009, Amendment 6	50% to 100%
2.	Pulverized fuel ash	Fineness – Blaines	IS 1727-1967 RA 2004	150 m ² /kg to 600 m ² /kg
		Autoclave Expn	IS 1727-1967 RA 2008 Amendment 1	0.01 to 1%
		Drying shrinkage	IS 1727-1967 RA 2008 Amendment 1	0.01 to 1%
		Lime Reactivity	IS 1727-1967 RA 2008 Amendment 1	2 to 20 Mpa
		Comparative compressive strength	IS 1727-1967 RA 2008 Amendment 1	1 to 100%
3.	Aggregates	Grading	IS 2386 (Part-1)-1963 RA 2011 Amendment 4	1 to 100%
		Deleterious materials	IS 2386 (Part-2)-1963 RA 2011 Amendment 1	0.1 to 10%
		Organic impurities	IS 2386 (Part-2)-1963 RA 2011 Amendment 1	Qualitative
		Specific gravity	IS 2386 (Part-3)-1963 RA 2011	2 to 4

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Last Amended on	-	Page	3 of 4

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	Aggregates	Flakiness index	IS 2386 (Part-1)-1963 RA 2011 Amendment 4	2 to 50%
		Elongation index	IS 2386 (Part-1)-1963 RA 2011 Amendment 4	2 to 50%
		Impact value	IS 2386 (Part-4)1963 RA 2011 Amendment 3	2 to 50%
		Crushing value	IS 2386 (Part-4)1963 RA 2011 Amendment 3	2 to 50%
		Abrasion value	IS 2386 (Part-4)1963 RA 2011 Amendment 3	2 to 50%
		Soundness	IS 2386 (Part-5)1963 RA 2011	0.5 to 25%
		Water absorption	IS 2386 (Part-3)1963 RA 2011	0.1 to 10%
		Bulk density	IS 2386 (Part-3)1963 RA 2011	1 to 3 kg/l
4.	Concrete cube	Compressive strength	IS 516-1959 RA 2008 Amendment 2	5 to 80 MPa
5.	Bricks	Compressive strength	IS 3495 (Part-1)-1992 RA 2011	3 to 60 MPa
		Water absorption	IS 3495 (Part-2)-1992 RA 2011	0.5 to 25%
		Efflorescence	IS 3495 (Part-3)-1992 RA 2011 Amendment 1	Qualitative

