

Laboratory	Alpha Test House, M-577, Guru Harkrishan Nagar, Paschim Vihar, New Delhi Location 1: M-577, Guru Harkrishan Nagar, Paschim Vihar, New Delhi Location 2: National Market Peeragarhi, New Delhi Location 3: 487/25, Peeragarhi, New Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	19.12.2014
Certificate Number	T-1871	Valid Until	07.12.2016
Last Amended on	-	Page	1 of 6

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Location 1				
I. BUILDING MATERIALS				
1.	Coarse/ Fine Aggregate Testing	Aggregate Abrasion value	IS 2386 (Part 4): 1963 (RA 2007)	5 % to 30 %
		Bulk Density	IS 2386 (Part 3): 1963 (RA 2007)	1 kg/l to 3 kg/l
		Crushing Value	IS 2386 (Part 4): 1963 (RA 2007)	5 % to 30 %
		Material Finer than 75 micron	IS 2386 (Part 1): 1963 (RA 2007)	0.1 % to 15 %
		10% Fine Value	IS 2386 (Part 1): 1963 (RA 2007)	5 kN to 300 kN
		Elongation Index	IS 2386 (Part 1): 1963 (RA 2007)	1 % to 50 %
		Flakiness Index	IS 2386 (Part 1): 1963 (RA 2007)	1 % to 50 %
		Impact Value	IS 2386 (Part 4): 1963 (RA 2007)	5 % to 30 %
		Organic Impurities	IS 2386 (Part 2): 1963 (RA 2007)	Qualitative
		Sieve Analysis	IS 2386 (Part 1): 1963 (RA 2007)	4.75mm to 150 mm
		Soundness	IS 2386 (Part 5): 1963 (RA 2007)	0.5 % to 10 %
		Specific Gravity	IS 2386 (Part 3): 1963 (RA 2007)	2.3 to 3.5
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2007)	1 % to 5 %
2.	Cement / Hydraulic Cement/ Portland Pozzolana Cement	Compressive Strength	IS 4031 (Part 6): 1988 (RA 2009)	0.5 MPa to 60 MPa
		Consistency	IS 4031 (Part 4): 2000 (RA 2009)	10 % to 35 %
		Sp. Gravity	IS 4031 (Part 11): 1988 (RA 2009)	1.8 to 3.8

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Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	19.12.2014
Certificate Number	T-1871	Valid Until	07.12.2016
Last Amended on	-	Page	2 of 6

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	Cement / Hydraulic Cement/ Portland Pozzolana Cement	Drying Shrinkage	IS 4031 (Part 10): 2009	0.01 % to 0.5%
		Fineness (Blain Air)	IS 4031 (Part 2): 2004 (RA 2008)	100 m ² /kg to 700 m ² /kg
		Fineness by dry sieving	IS 4031 (Part 1): 1996 (RA 2011)	1.0 % to 3.2 %
		Setting Time (Initial)	IS 4031 (Part 5): 2000 (RA 2009)	10 min to 300 min
		Setting Time (Final)	IS 4031 (Part 5): 2000 (RA 2009)	10 min to 600 min
		Soundness Auto Clave expansion method	IS 4031 (Part 3): 2000 (RA 2009)	0.02 % to 4 %
		Soundness Le-Chatlier Method	IS 4031 (Part 3): 2000 (RA 2009)	0.5 mm to 5 mm
3.	Building Bricks/ Fly Ash Lime Bricks	Compressive Strength	IS 3495 (Part 1): 2002 (RA 2007)	1 N/mm ² to 20 N/mm ²
		Dimensions		
		Length	IS 1077: 1992 (RA 2007)	4500 mm to 5000 mm
		Width		2100 mm to 2500mm
		Height		1300 mm to 1500mm
		Efflorescence	IS 3495 (Part 3): 1992 (RA 2007)	Qualitative
		Water Absorption	IS 3495 (Part 2): 1992 (RA 2007)	0.1 % to 30 %

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Certificate Number **T-1871** **Valid Until** **07.12.2016**

Last Amended on **-** **Page** **3 of 6**

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4.	Soil	CBR Test	IS 2720 (Part 16): 2001 (RA 2007)	0 % to 30%
		Compaction Test (Light)		
		Maximum Dry Density	IS 2720 (Part 7): 1980 (RA 2002)	1.2 gm/cc to 2.3 gm/cc
		Optimum Moisture Content	IS 2720 (Part 7): 1980 (RA 2002)	4 % to 25%
		Compaction (Heavy)		
		Maximum Dry Density	IS 2720 (Part 8): 1980	1.2 gm/cc to 2.5 gm/cc
		Optimum Moisture Content	IS 2720 (Part 8): 1980	4 % to 25 %
		Free Swell Index	IS 2720 (Part 40): 1977 (RA 2002)	0 % to 50 %
		Grain Size	IS 2720 (Part 4): 2001 (RA 2007)	0.075 mm to 4.75 mm
		Liquid Limit	IS 2720 (Part 5): 2001 (RA 2005)	15 % to 80 %
		Plastic Limit	IS 2720 (Part 5): 2001 (RA 2005)	7 % to 35 %
		Sieve Analysis	IS 2720 (Part 4): 2001 (RA 2005)	0.075 mm to 4.75 mm
		Sp. Gravity	IS 2720 (Part 3 /Sec I and II): 1980	1.5 to 3.0
5.	Concrete Cube	Compressive Strength	IS 516: 1959 (RA 2008)	0.5 N/mm ² to 75 N/mm ²
6.	Bentonite Bentonite	Fineness	IS 6186: 1997 (RA 2003)	70 to 100
		Moisture	IS 6186: 1997 (RA 2003)	0.1 % to 10 %
		Sand Content	IS 6186: 1997 (RA 2003)	0.1 % to 20 %

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Discipline **Mechanical Testing** **Issue Date** **19.12.2014**

Certificate Number **T-1871** **Valid Until** **07.12.2016**

Last Amended on **-** **Page** **4 of 6**

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7.	P.O.P.	Residue on 90 μ sieve	IS 2542 (Part 1): 1978 (RA 2007)	0.1 % to 10 %
		Setting Time Plaster sand mixture Neat Plaster	IS 2542 (Part 1/Sec III) (RA 2007)	10 min to 50 min
		Soundness	IS 2542 (Part 1 /Sec VI): 1978 (RA 2007)	Qualitative
		Transverse Strength	IS 2542 (Part 1/Sec IV): 1978 (RA 2007)	1 kg/cm ² to 20 kg/cm ²
8.	Bitumen	Density	IS 1202: 1978 (RA 1998)	1 gm/cc to 1.3 gm/cc
		Penetration	IS 1203: 1978 (RA 1998)	5 mm to 100 mm
		Softening Point	IS 1205: 1978 (RA 1998)	40°C to 80°C
9.	Fly Ash	Fineness (Blain Air)	IS 1727: 1967 (RA 2008)	100 m ² / kg to 500 m ² / kg
		Particle Retained on 45 μ sieve	IS 1727: 1967 (RA 2008)	0 % to 80 %
10.	Fresh Concrete	Slump	IS 1199: 1959 (RA 2008)	0 mm to 200 mm

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Certificate Number **T-1871** **Valid Until** **07.12.2016**

Last Amended on **-** **Page** **5 of 6**

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II. MECHANICAL PROPERTIES OF MATERIALS				
1.	Steel/ Reinforcement/ Structural Steel	Bend Test	IS 1599: 1985 (RA 2012)	Qualitative 8 mm to 40 mm (Mandrel Dia:- 16,20,24,30,32,36,40, 48,50,60,64,75,80,84, 96,100,108,112,120, 125,128,140,144,150, 160,168,180,192,200, 216,240) mm
		Elongation %	IS 1608: 2005 (RA 2011)	0.5 % to 30 %
		Hardness (HRC)	IS 1586: 2000 (RA 2012)	20 HRC to 65 HRC
		Hardness (HRB)	IS 1586: 2000 (RA 2012)	30 HRB to 99 HRB
		Hardness (HB)	IS 1500: 2005 (RA 2011)	25 HB to 650 HB
		Impact, Charpy (V)	IS 1757: 1988 (RA 2009)	2 J to 300 J
		Impact, Charpy (U)	IS 1499: 1977 (RA 2009)	2 J to 300 J
		Impact, Izod	IS 1598: 1977 (RA 2009)	2 J to 160 J

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Certificate Number **T-1871** **Valid Until** **07.12.2016**

Last Amended on **-** **Page** **6 of 6**

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		Rebend Test	IS 1786: 2008	Qualitative 8 mm to 40 mm Mandrel Dia.(mm)- 32,40,48,50,56,60,70, 72,84,96,112,120, 128,140,150,160, 168, 175,192,196,200, 216,224,240,252,256, 280,288,320
		Tensile Strength	IS 1608: 2005 (RA 2011)	0.1 N/mm ² to 800 N/mm ²
		Yield Stress	IS 1608: 2005 (RA 2011)	0.1 N/mm ² to 600 N/mm ²

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