

Laboratory	Becquerel Industries Pvt. Ltd., A-36, MIDC, Butibori, Nagpur, Maharashtra		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	24.09.2015
Certificate Number	T-2663	Valid Until	23.09.2017
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
I.	MECHANICAL PROPERTIES OF MATERIALS			
1.	Metals & Alloys	Tensile Testing		
		Tensile Strength	IS 1608: 2005	150 Mpa to 1500 Mpa
		Yield/ Proof Strength	IS 1786: 2012	150 Mpa to 1350 Mpa
		% of Elongation	IS 1786: 2012	Upto 60 %
		% of Reduction	IS 1786: 2012	UPto 80 % (12 kN to 600 kN)
		Bend Test	IS 1599: 2012	No. of Mandrels Size 12,20,24,32,36,40,42,48,5 4,60,66,84,100,112,120,1 25,224
		Rebend Test	IS 1786: 2012	No. of Mandrels Size 12,20,24,32,36,40,42,48,5 4,60,66,84,100,112,120,1 25,224
2.	Metals & Alloys (Steel)	Impact Test		
		Charpy Impact Test	IS 1757: 1988 (RA 2003)	Upto 300 J (2 J)
		‘V’ & ‘U’ Notch	IS 1499: 1977 (RA 2003)	Room Temp to (-)49 °C
		Izod test	IS 1598: 1977 (RA 2003)	Upto 160 J (2 J) Room Temp.
3.	Metals & Alloys (Steel)	Hardness Test		
		HRC	IS 1586 (Part 1): 2012	20 HRC to 70 HRC
		HRB	IS 1586 (Part 1): 2012	50 HRB to 98 HRB
		Weight/Meter	IS 1786: 2012	0.10 kg/m to 10 kg/m

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Certificate Number	T-2663	Valid Until	23.09.2017
Last Amended on	-	Page	2 of 4

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II. BUILDING MATERIALS				
1.	Aggregate (Fine)	Sieve Analysis (150 Micron to 4.75mm)	IS 2386 (Part 1): 1963 (RA 2007)	0.1 % to 99.9 %
		Specific gravity	IS 2386 (Part 3): 1963 (RA 2007)	2.00 to 3.00
		Water absorption	IS 2386 (Part 3): 1963 (RA 2007)	1.0 % to 5.0 %
		Bulk Density	IS 2386 (Part 3): 1963 (RA 2007)	1000 kg/m ³ to 3000 kg/m ³
2.	Aggregate (Coarse)	Sieve Analysis (4.75 mm to 80mm)	IS 2386 (Part 1): 1963 (RA 2007) Amd 4	0.1 % to 100 %
		Specific gravity	IS 2386 (Part 3): 1963 (RA 2007)	2.00 to 3.00
		Water absorption	IS 2386 (Part 3): 1963 (RA 2007)	0.10 % to 5.0 %
		Flakiness Index	IS 2386 (Part 1): 1963 (RA 2007) Amd 4	1 % to 40 %
		Elongation Index	IS 2386 (Part 1): 1963 (RA 2007) Amd 4	1 % to 40 %
		Impact Value	IS 2386 (Part 4): 1963 (RA 2007) Amd 3	1 % to 50 %
		Crushing Value	IS 2386 (Part 4): 1963 (RA 2007) Amd 3	1 % to 50 %

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Certificate Number	T-2663	Valid Until	23.09.2017
Last Amended on	-	Page	3 of 4

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	Aggregate (Coarse)	Los Angles Abrasion Value	IS 2386 (Part 4): 1963 (RA 2007) Amd 3	10 % to 60 %
		10% Fine Value	IS 2386 (Part 4): 1963 (RA 2007)	5t to 50t
3.	Cement OPC, PPC, Slag cement	Consistency, %	IS 4031 (Part 4): 1988 (RA 2009) Amd 2, Rev 1	15 % to 35 %
		Initial Setting Time	IS 4031 (Part 5): 1988 (RA 1995) Rev 1, Amd 2	50 min to 200 min
		Final Setting Time	IS 4031 (Part 5): 1988 (RA 1995) Rev 1, Amd 2	200 min to 600 min
		Fineness by Blain Air Permeability	IS 4031 (Part 2): 1999 (RA 2008) Rev 2, Amd 1	200 m ² /kg to 600 m ² /kg
		Soundness by Lechatlier	IS 4031 (Part 3): 1988 (RA 2009) Rev 1, Amd 2	0.5 mm to 10 mm
		Soundness by Autoclave	IS 4031 (Part 3): 1988 (RA 2009) Rev 1, Amd 2	0.05 % to 2.0 %
		Compressive Strength, N/mm ²	IS 4031 (Part 6): 1988 (RA 2009) Rev 1, Amd 3	10 N/mm ² to 70 N/mm ²
4.	Hardened Concrete	Compressive Strength	IS 516: 1959 (RA 2004) Amd 2	1 N/mm ² to 80 N/mm ²
5.	Bricks	Dimension	IS 1077: 1992 Rev 5, Amd-1	500 mm to 5000 mm
		Water Absorption	IS 3495 (Part 2): 1992 (RA 2007) Rev 3	5 % to 40 %

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Last Amended on	-	Page	4 of 4

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	Bricks	Compressive strength N/mm ²	IS 3495 (Part 1): 1992 (RA 2007) Rev 3	10 kg/cm ² to 150 kg/cm ²
		Efflorescence	IS 3495 (Part 3): 1992 (RA 2007) Rev 3	Qualitative
III. SOIL & ROCK TESTING				
1.	Soil	Moisture Content	IS 2720 (Part 2): 1973 (RA 2010)	1 % to 50 %
		Liquid Limit	IS 2720 (Part 5): 1985 (RA 2010)	20 % to 80 %
		Plastic limit, %	IS 2720 (Part 5): 1985 (RA 2010)	10 % to 35 %
		Specific gravity	IS 2720 (Part 3/Sec I): 1980 (RA 2011)	1.5 to 3
		Sieve Analysis	IS 2720 (Part 4): 1985 (RA 2010)	0.1 % to 99.9 %
		Compact Test :- Light Compaction Heavy Compaction	IS 2720 (Part 7): 1980 (RA 2011) & IS 2720 (Part 8): 1983 (RA 2010)	MDD 1.25 g/cc to 2.30 g/cc OMC 8 % to 30 %
		California Bearing Ratio	IS 2720 (Part 16): 1987, (RA 2011)	1 % to 60 %

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