National Council for Cement and Building Materials
Independent Testing Laboratories

Testing Services

Sl. No.	Type of Test
OPC/PPC/PSC/White Cement, Pozzolana, etc. IS 269/8112/12269/1489/455/8042/8122/3812/1527/12330	
1	Fineness (Blaine)
2	Setting Time
3	Le-Chatelier Expansion
4	Autoclave Expansion
5	Compressive Strength (per age)
6	Drying Shrinkage
7	Consistency
8	Heat of Hydration (per age)
9	Degree of Whiteness
10	Chemical Analysis of OPC/Clinker, PSC: Major Constituents & chloride
11	Chemical Analysis of PPC : Major Constituents & chloride
12	Chemical Analysis of Pozzolana, Slag, refractories & other raw materials : Major Constituents
13	Lime Reactivity
14	Cement Reactivity Compressive Strength (28 days)
15	Alkalies
16	Titanium
17	Phosphates
18	Manganese
19	Chlorides
20	Fluoride
21	Chromium
22	Heavy Elements by ICP-OES
23	Physical Tests **a) OPC/PSC** **b) PPC**
24	Chemical and Physical Tests **OPC/PSC**
25	Chemical and Physical Tests **PPC**
26	All test of Low Heat Cement
27	All test of White Cement
28	All test of Burnt Clay Pozzolana (IS:1344) (SS+DS+LR+CR)
29	**Chemical and Physical Tests of Pulverised Fuel Ash (IS:3812)** ***Excluding optional test***
30 a	**Retention on 45u sieve**
30 b	**Reactive Silica**
30 c	**Reactive CaO**
31	Chemical and Physical Tests of Silica Fume
32	Pozzolanic Reactivity
AGGREGATES : IS 383/2386	
33	Sieve Analysis
34	Specific Gravity
35	Water Absorption
36	Bulk Density

Sl. No.	Type of Test
37	Bulking of Sand
38	Aggregate Impact Value
39	Aggregate Crushing Value
40	Aggregate Abrasion Value (Los Angeles)
41	Silt Content
42	Deleterious Materials
43	Organic Impurities
44	Flakiness/Elongation Index
45	Soundness
46	Alkali-Aggregate Reactivity (Chemical Method) as per IS:2386
47	Alkali-Aggregate Reactivity (Mortar Bar Method) at one temperature regime as per IS:2386
48	Mortar making properties of fine Aggregate
49	Testing of Coarse Aggregate as per IS:2386 including test at Sl. No.47 for one temperature regime
50	Testing of Fine Aggregate as per IS:2386 including test at Sl. No.47 for one temperature regime
COAL : IS 1350	
51	Moisture (As received basis)
52	Ash
53	Volatile Matter
54	Proximate Analysis
55	Ash and Moisture at equilibrated basis
56	Preparation of ash for Chemical Analysis
57	Carbon & Hydrogen
58	Nitrogen
59	Sulphur
60	Ultimate Analysis (Ash+MC+C+H+N+S)
61	Calorific Value
62(a)	Hardgrove Grindability Test
62(b)	Pre-conditioning of sample for testing at equilibrated basis ($40^{o}C$ & $60^{o}C$)
MISCELLANEOUS TESTS	
63	Fineness, Retention % (Sieving, Dry/Wet) per sieve
64	Consistency
65	Specific Gravity
66	Determination of Silica
67	Determination of Alumina
68	Determination of Iron Oxide
69	Determination of Calcium Oxide (CaO)
70	Determination of Magnesium Oxide (MgO)
71	Determination of Sulphate (SO_3)
72	Determination of Insoluble Residue
73	Determination of Loss on Ignition
74	Determination of Free Lime
75	Free Silica Estimation
76	Total Carbonate or CO_2
77	Particle Size Analysis by Laser Beam
78	Transverse Strength at one age

Sl. No.	Type of Test
79	**Bond Work Index**
80	Compressive strength of rock (after cutting to size)
81	Technical Comments on Chemical/Physical Test – per sample
REFRACTORIES : IS 1527/1528	
82	Chemical (Major Oxides)
83	Cold Crushing Strength Standard Specimen Specimen to be prepared
84	Apparent Porosity Standard Specimen Specimen to be prepared
85	Specific Gravity / Density
86	Bulk Density
87	Water Absorption
88	Resistance to Acid
89	Modulus of Rupture
90	Spalling Test Air Quenching at 950^0C (for 15 Cycles) Water Quenching at 1300^0C (for 8 Cycles)
91	Deformation Temperature by heating microscope
92	Permanent Linear Change (PLC)
93	Thermal Conductivity at one temperature
94	Refractoriness under Load (RUL)
95	Pyrometric Cone Equivalent (PCE)
BUILDING BRICKS : IS 3495 / 1077	
96	Compressive Strength
97	Water Absorption
98	Efflorescence
99	Dimension
PULVERISED FUEL ASH BRICK : IS 12894 / 3495	
100	Water absorption
101	Compressive strength
102	Efflorescence
103	Dimension
WATER : IS 456	
104	Chemical Analysis
105	Comparative Compressive Strength IS: 456
WATER : IS 3025	
106	Chemical Analysis
107a	Fluoride
107b	Iron
107c	Color
107d	Sulphate
107e	Nitrate
107f	Phosphate
107g	Nickel
107h	pH
107i	Total Dissolved Solids (TDS)
107j	Chloride
107k	Copper (Cu)

Sl. No.	Type of Test
107l	SiO_2
107m	Alkalies (Sodium, Potassium)
CONCRETE : IS 516 / NCB Method	
108	Compressive Strength (3 Specimen) up to 150 mm cubes
CONCRETE BLOCK (Hollow/Solid)	
109a	Water absorption
109b	Block Density
109c	Dimension
PAVER BLOCK	
110a	Water absorption
110b	Dimension
CEMENT CONCRETE FLOORING TILES	
111	Water absorption
112	Dimension
MARBLE GRANITE (Stone / Tiles)	
113a	Water absorption
113b	Dimension
113c	Specific gravity
113d	Apparent porosity
113e	Hardness by Moh's scale
INTEGRAL CEMENT WATER PROOFING COMPOUND : IS 2645	
114a	Permeability to Water
114b	Setting Time
114c	Compressive Strength (3, 7 days)
115a	pH Value
115b	Dry Material content
115c	Ash content
115d	Relative density
115e	Chloride content
OPTICAL MICROSCOPY	
116a	Petrographic examination of Limestone, Bauxite, Laterite and other Cement Raw Materials with Quantitative estimation
116b	Petrographic examination of Coarse & Fine Aggregate including Granulometric Analysis, Strained quartz percentage & undulatory extinction angle as per IS:2386- (Pt VIII)
116c	Glass content of Fly ash and various types of Slags with photomicrographs
116d	Granulometry and Mineralogy of Slag and Fly ash
116e	Petrographic examination of Clinker & Refractories
116f	Petrofabric Analysis of Rocks used in Geo-technical investigation with photomicrographs
116g	Quantitative estimation of minerals including Granulometric Analysis of Raw Meal and Powdered Raw Mix
116h	Mohs' Hardness Test
116i	Refractive Index of Minerals
XRD, XRF & Thermal Analysis	
117a	Routine qualitative X-ray Diffractometry of Building Materials
117b	Routine qualitative X-ray Diffractometry of materials other than Building Materials
117c	Qualitative X-ray Diffractometry of Rings/ Coatings/ Build-ups/ Refractory etc
117d	Semi quantitative X-ray Diffraction analysis of Cement Clinker
117e	Study of Polymorphism of Clinker Phases and semi quantitative analysis
118	Simultaneous DTA/TG/DTG/DSC Analysis up to 1450^0C of Clinker and related Building Materials

Sl. No.	Type of Test
119	X-ray Fluorescence Chemical Constituents of Cement, Raw Materials and pulverized fuel ash
120	Infrared spectroscopic analysis per sample
MASONRY CEMENT :IS 3466	
121a	Air Content
121b	Water Retention
SULPHATE RESISTING CEMNET IS:12330	
122	Potential expansion of Cement Mortar exposed to Sulphate at 14 days
GYPSUM : IS 1288	
123a	Chemical Analysis
123b	Combined Water only
123c	Purity (SO_3) only
LIME : IS 712 and IS 6932	
124	Chemical Analysis
125	Fineness
126	Setting Time
127	Soundness
128	Compressive Strength
129	Transverse Strength
LIME POZZOLANA MIXTURE : IS 4098	
130	Free Moisture
131	Loss on Ignition
132	Available Lime
133	Sulphate Content
134	Magnesium Oxide
135	Fineness
136	Setting Time
137	Water Retention
138	Compressive Strength
139	Soundness by Autoclave
SOIL TESTING	
140	Sieve analysis
141	Moisture Content
142	Free Swell Index
143	Water Content
144	Specific gravity
STEEL TESTING	
145	Tensile Strength, Yield Stress, Elongation, Mass per meter up to 12 mm dia
146	Tensile Strength, Yield Stress, Elongation, Mass per meter more than 12 mm dia

Note :

- Required quantity of samples shall be submitted with a test request letter mentioning the nature of sample, tests required, protocol to be followed and complete address and other contact details of the customer.
- Quotation for testing charges, quantity required may be obtained from given below address/email.
- Payment shall be made (100% in advance) through cash or demand draft in favour of "National Council for Cement and Building Materials" payable at Faridabad / New Delhi
- Service Tax, Cess and other applicable taxes would be charged at the prevailing rates

- Testing charges would be 1.5 times for tests other than Indian Standards
- *For Express testing the charges would be twice the rates of normal testing*
- Laboratory reserves the right to revise and / or change the testing rates without any prior notice

For further details please contact us:

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