

**Services Provided by CDR for Evaluation of Concrete Making Materials,
Concrete Mix Design and Concrete Testing**

SI No.	Name of Test/Service	Standard Procedure
A)	EVALUATION OF CONCRETE MAKING MATERIALS	
1	Complete Evaluation and Recommendations of Cement Based on Physical and Chemical Properties	As per relevant IS
2	Complete Evaluation and Recommendations of Coarse Aggregate Sample Based on Physical and Mechanical Properties (i.e. Specific gravity, water absorption, sieve analysis, deleterious materials, soundness, crushing value, impact value, abrasion value, flakiness and elongation index)	IS: 2386
3	Complete Evaluation and Recommendations of Fine Aggregate Sample Based on Physical Properties (i.e. Specific gravity, water absorption, material finer than 75 μ , sieve analysis, deleterious materials, soundness, organic impurities)	IS: 2386
4	Alkali Aggregate Reactivity (Evaluation and Recommendation):	
4.1	Petrography	IS:2386-Pt-8
4.2a)	Accelerated Mortar Bar Test	ASTM-C-1260
4.2b)	Accelerated Mortar Bar Test (with PPC/PSC)	ASTM-C-1567
4.3	Mortar Bar Test	IS:2386-Pt-7
4.4	Prism Bar Test	ASTM-C-1293
5	Alkali Carbonate Reactivity (Evaluation and Recommendations)	ASTM-C-1105
6	Mica Content	As per NCB Procedure
7	Repeated Thermal Temperature Cycle Testing and Recommendations	As per NCB Procedure
8	Testing and Evaluation of Water	IS:456
9	Evaluation of Chemical Admixture	IS: 9103-1999
10	Testing of Accelerating Admixture for Shotcrete	ASTM C-1141 (Temp. 27 ⁰ +2 ⁰ C)
11	Complete Evaluation and Recommendations of Flyash Based on Physical and Chemical Properties	As per Requirements of IS:3812
B)	TESTING OF CORROSION INHIBITING ADMIXTURE	
1	Modified Accelerated Corrosion Test	JIS Z1535
2	Immersion Test (Rebar Weight Loss Method)	ASTM-G-1
3	Polarization Test (by Tafel Polarization)	ASTM-G-3
C)	CONCRETE MIX DESIGN	
1	Mix Design of ordinary concrete, standard concrete and high strength concrete using OPC, PPC, PSC, OPC + Flyash, OPC + Flyash + Silica fume etc.	IS: 10262-2009
2	Mix Design of special concrete as per relevant standards/specifications such as:	
a)	High Performance Concrete	As per relevant Standard and Meeting the Technical Specification
b)	Pervious Concrete	
c)	Plastic Concrete	
d)	High Volume Flyash Concrete	
e)	Self-Compacting Concrete	
f)	Pavement Quality Concrete	
g)	Dry Lean Concrete	
h)	Roller Compacting Concrete	
i)	Under Water Concrete	
j)	Fiber Reinforced Concrete	
k)	Controlled Low Strength Material (CLSM)	
l)	Shotcrete	
m)	Non Shrink Grout etc.	



D)	CONCRETE TESTING	
1.	Flexural Strength Test	IS: 516
2.	Spilt Tensile Strength Test	IS: 5816
3.	Water Permeability Test	DIN-1048-Pt-5
4.	Rapid Chloride Penetrability Test	ASTM-C1202
5.	Pullout/bond Strength of Concrete	IS: 2770-Pt-1
6.	Modulus of Elasticity (MOE)	IS: 516
7.	Modulus of Elasticity with Poisson Ratio	IS: 516
8.	Drying Shrinkage	IS: 1199
9.	Moisture Movement Testing	IS: 1199
10.	Creep Test up to 90 & 180 days	ASTM-C-512
11.	Fatigue Test	-
12.	Coefficient of Linear Expansion of Concrete	CRD C39-81
13.	Accelerated Carbonation Test	ISO: 1920 Pt-12
14.	Sorptivity (Absorption) Test	ASTM-C1585
15.	Volume of Permeable Voids	ASTM C642
16.	Abrasion Resistance by Revolving Disks Method	ASTM C779
17.	Abrasion Resistance by Underwater Method	ASTMC C1138
18.	Flexural Performance of fiber Reinforced Concrete (using Beam with Third Point Loading)	ASTM C1609
19.	Flexural Toughness of fiber Reinforced Concrete (using Centrally Loaded Round Panel)	ASTM C1550
20.	Sulphate Immersion Test on Mortar Bar	ASTM C1012
21.	Chloride Diffusion Test	ISO: 1920 Pt-11/ASTM C1556
22.	Non Steady State Chloride Migration Test	NT Build 492
23.	Accelerated Corrosion Test using Impressed Current	Florida Test Method (FM 5.522)
24.	Electrical Resistivity Test	-
25.	Air Permeability Test	-

Contact Details:

Head of Centre

Centre for Construction Development and Research

National Council for Cement and Building Materials

34 Km Stone, Delhi-Mathura Road (NH-2), Ballabgarh-121 004, Haryana, INDIA

Phone : +91-129-2666640 (D), 2666758

Board : +91-129-2666600

E-mail : cdrb@ncbindia.com