

Table 3-3: concrete classification, mix design, and material specification

No	Item	Class of concrete		
		A	B	C
	Free Water/Cement Ratio	≤0.40		≤0.5
	Ph	7 < pH < 9		
	Chlorides	≤0.025%		
	Sulphates	≤0.035%		
	Alkali Carbonates & Bicarbonates	≤0.05%		
	TDS	≤0.2%		
7	Density			
	Minimum Kg/m ³	2400		2300
8	Slump	To be determined during design mix tests but normal range 75-125mm		
9	Admixtures	Strictly in accordance with manufacturer's instructions with CaCl ₂ content zero		N/A
10	Temperature			
	Cement	≤45°C when entering mixers		
	Concrete	At Placement ≤32°C		
	Shade	≤40°C & Rising or < 43°C & Falling		
11	Quality Control on fresh and hardened concrete in accordance with clause 3.10 of this section			

3.2.2 Admixtures

- A. Chemical: ASTM C494 and BS 5075.
- Do not use admixtures containing chlorides.
 - Use water-reducing admixture, retarding admixture, and accelerating admixture in accordance with the manufacturer's recommendation.
 - Conduct trial mixes in the presence of the Engineer and the manufacturer representative.
 - Do not use admixture together with other admixture in the same mix.
 - Do not use admixture intended to change the flow characteristics, cohesion or rate of setting of the concrete without the approval of the Engineer.

3.2.3 Accessories

- A. Bonding Agent: Polymer resin emulsion, Polyvinyl Acetate, Latex emulsion, two component modified epoxy resin, Non-solvent two-component polysulfide epoxy, Mineral filled polysulfide polymer epoxy, Mineral filled polysulfide polymer epoxy