

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

No	Item		Class of concrete		
			A	B	C
				basins, outfalls, pump stations and all RC members.	
2	Grade		C40		
3	Minimum Cube Strength N/mm ²				
	7 Days		30 min		15
	28 Days		40 min		20
4	Cement				
	Type	Above GL	OPC		
		Below GL	MSRC		
	Content	Minimum	390		250
	Kg/m ³	Maximum	450		325
	Age		≥3 months		
5	Aggregate				
	Nominal Size(mm)		10	20	
	% Fine		30-45	45-55	
	Combined Flakiness Index		≤35%		
	Combined Elongation Index		≤35%		
	10% fines value		≥75kN		
	Los Angeles abrasion value		≤30%		
	Grading	Fine	≤10% > 5mm		
		Coarse	≤ 5% > 10mm ≤ 10% < 5mm	≤5% > 20mm ≤10% < 5mm	
	Clay Lumps (by weight)		Fine ≤3% Coarse ≤1% by Weight		
	Absorption		≤2.5%		
	Voided Shells		≤3.0%		
	Chlorides		Fine ≤0.06% Coarse ≤0.03%		
	Sulphates		≤0.4%		
	Soundness		Loss of Na ₂ SO ₄ ≤10% & MgSO ₄ ≤15%		
	Alkali Reaction		None		
	Thermal Expansion		≤Low		
	Friable Particles (by weight)		Fine ≤1% Course ≤ 0.5% by Weight		
6	Water				