cement-aggregate combination will be stable and not liable to excessive internal expansion due to alkali-aggregate reaction. The Contractor's proposals for demonstrating this shall be submitted and shall take account of the time necessary for any testing. Under exceptional circumstances, the demonstration may be based on previous long-term experience of the materials. Otherwise, the Contractor shall undertake a programme of tests using an independent testing laboratory in accordance with the following requirements:

a. Aggregates shall comply with the requirements of Table 3-3.

b. Aggregates shall be initially assessed for reactivity in accordance with ASTM C289 and C1260 and if potential reactivity is indicated, then tests in accordance with ASTM C227 and C586 shall be carried out.

19. The Contractor shall carry out routine testing of aggregates for compliance with the Specification during the period in which concrete is being produced for the Permanent Works. The tests set out below shall be performed on aggregates from each separate source.

C. Water: Comply with the requirement of BS 3148.

1. Potable, clean, fresh, and free from sand grit and all mater, this is detrimental to concrete.

2. PH of water in concrete work not be less than 5 and no more than 9.

3. The maximum content of acid soluble chlorides (as NaCl) in any concrete mix not to exceed 0.4 % by weight of cement.

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

No	Item	Class of concrete			
		A	B		C
1	Typical applications	Reinforced			Unreinforced
		Shall be used in congested areas at the discretion of the Engineer.	Anchor blocks Slabs ≥ 250mm thick. Precast Work Slabs < 200mm thick Columns and beams. Chambers, manholes ,inlet catch	Circular shafts	Infilling soft areas and over break. Blinding & pipe surround.