

- T = curing temperature in °C
D = age at testing in days
A&B = are coefficients given in the following table

The equation applies only to OPC, MSRPC and SRPC.

Table 3-2: Coefficients for adjusted CCS Calculations

| Recorded Cube Strength (MPa) ¹ | A | B |
|---|------|------|
| Less than 15 | 10.0 | 67.5 |
| 15 to 35 | 20.0 | 60.0 |
| Greater than 35 | 30.0 | 52.5 |

This calculation may be applied for curing at temperatures up to 27°C.

- I. Before placing concrete the Contractor shall obtain approval of the mixes proposed for each class of concrete and the average target strengths. The mixes shall be designed to achieve the minimum workability for the Contractor to place and compact the concrete with the equipment proposed for use.
- J. The design mean strength shall exceed the minimum CCS specified in the performance requirements by a margin of 1.64 times the standard deviation expected from the concreting plant, except that no standard deviation less than 3.5 MPa shall be used as a basis for designing a mix.

3.1.12 Preliminary Mix Tests

- A. Perform preliminary mix tests before commencement of the main concreting operation.
- B. Determine for each class of concrete, minimum water-cement ratio, and the actual mix proportions of the fine and coarse aggregates required.
- C. Determine accurately the weight of materials in the preliminary mix test; allowances must be made for the moisture content of the aggregates.
- D. Test the preliminary mix design for strength and workability.
- E. Repeat and adjust proportions of the preliminary mixes as necessary until concrete mixes meet the relevant requirements.

3.1.13 Concrete Trial Mixes

- A. Preliminary laboratory tests shall be carried out to determine if the mixes satisfy the Specification with the approved materials.
- B. Trial mixes shall be tested to determine the following properties of mixes proposed for initial field tests: