

Refer to
Circular no.
202

Required Combination Types for Durable & Green
Reinforced or Prestressed Concrete Elements
(Updated)

June, 2016

For Substructure

Options	Lowest Nominal Concrete Cover (mm)	Maximum W/C Ratio	Minimum Combination Content ^C (kg/m ³)	Composition
1 ^D	50 ^A , 75 ^B	0.45	360	PC with 66% to 80% GGBS
2	50 ^A , 75 ^B	0.40	380	PC with 36% to 55% Fly Ash
3 ^D	50 ^A , 75 ^B	0.35	380	PC with 36% to 65% GGBS
4	50 ^A , 75 ^B	0.35	380	PC with 26% to 35% Fly Ash

For Superstructures

Options	Compressive Strength Class (Cylinder/Cub)	Lowest Nominal Concrete Cover (mm)	Maximum W/C Ratio	Minimum Combination Content ^C (kg/m ³)	Composition
5	≥ C45/55 *	30	0.35	380	PC with 26% to 35% GGBS
6	≥ C45/55 *	30	0.35	380	PC with 16% to 20% Fly Ash
7 ^D	C40/50	30	0.35	380	PC with 36% to 65% GGBS
8 ^D	C40/50	30	0.35	380	PC with 26% to 35% Fly Ash
9 ^D	C32/40	30	0.4	380	PC with 66% to 80% GGBS
10	C32/40	30	0.4	380	PC with 36% to 55% Fly Ash
11 ^D	C32/40	30	0.45	360	PC with 36% to 65% GGBS
12 ^D	C25/30	35	0.50	340	PC with 66% to 80% GGBS
13 ^D	C25/30	35	0.50	340	PC with 36% to 55% Fly Ash
14 ^D	Blinding (Non structural elements)	--	0.55	220	PC with 36% to 65% GGBS
15 ^D	Blinding (Non structural elements)	--	0.55	220	PC with 26% to 35% Fly Ash

Reference code number: BS 8500-1:2006

A) For concrete cast against blinding.

B) For concrete cast directly against the soil.

C) For maximum aggregate size of 20 mm.

D) Inclusive of low early strength option.

► PC = Portland Cement.

► GGBS = Ground Granulated Blast furnace Slag.

* Allow for compressive strength testing at 56 days.

* Addition 4 to 7% Silica fume for classes ≥
C80/100 is recommended.