



PRODUCT DATA SHEET

DP 40 – Cement Replacement

Description DP 40 is a high efficiency pozzolanic material, obtained by selection and processing of power station fly ashes resulting from the combustion of pulverised bituminous coal. DP 40 is subjected to strict quality control.

General Information

Presentation	Finely divided dry powder
Colour	Light grey
Bulk Weight	Aprox. 1.0 metric ton per cubic meter
Specific density	Aprox. 2.3 metric ton per cubic meter
Particle size	Maximum 25 % ROS on 45 micron sieve
Particle shape	Spherical
Package	1 metric ton big-bags and bulk tankers

Recommended uses

Concrete	General purpose plain and reinforced structural concrete Mass concrete to reduce the heat of hydration Pumpable concrete by providing excellent workability
Cement	Blended cements (Portland Pozzolana Cement), such as sulphate resistant/marine resistant cement.
Mortar	General purpose mortar for plastering and brickwork. Specialised mortars for floor / wall tiling work. Flowable mortars for use as structural fill in earthworks.
Grout	General purpose grouts for use in earthworks for the treatment of rock cracks.

DP 40 – Cement Replacement

Recommended dosages

The dosages of DP 40 and the other mix constituents should be determined by appropriate mix design testing. They will depend on required mix properties, grade of cement, admixtures used, etc. The following figures are indicative.

Typical replacement levels with DP 40

	Percentage of total binder	Dosage
Mass concrete	50%	100 – 150 kg/m ³

Typical concrete performance with 25% DP 40

Workability	Improved
Setting Time	Increased 30 - 60 min
Long Term Strength	Increased 15% -20%
Early Strength (7 days)	Reduces by 20%
Required Curing	8 to 10 Days
Permeability	Reduced 2 - 5 times
Sulphate Attack	Substantially Reduced
Chlorine Penetration	Substantially Reduced
Heat of Hydration	Substantially Reduced
Plastic Shrinkage	Reduced