

# Production of Concrete Admixtures (Additives). Construction Chemicals. Admixture. Chemical Admixtures used in Concrete.

## Description:

Admixtures are artificial or natural materials added to the concrete besides cement, water and aggregate to improve certain property of concrete during casting or setting or service stage.

A material other than water, aggregates, or cement that is used as an ingredient of concrete or mortar to control setting and early hardening, workability, or to provide additional cementing properties.

Admixtures are generally used to alter the properties of concrete (such as increased workability or reduced water content, acceleration or retardation of setting time, acceleration of strength development, and improved resistance to weather and chemical attacks) to make it more suitable for a particular purpose. For example, calcium chloride can be used to accelerate strength development in mass concrete during winter. Air-entraining admixtures (inexpensive soaps, detergents, etc.) entrain air which greatly improves the workability of concrete and thus permits the use of harsher and more poorly graded aggregates and also those of undesirable shapes.

## Functions of Admixture

Major functions and advantages of using admixtures are detailed below:

- To improve workability of fresh concrete
- To improve durability by entrainment of air
- To reduce the water required
- To accelerate setting & hardening & thus to produce high early strength
- To aid curing
- To impart water repellent / water proofing property
- To cause dispersion of the cement particles when mixed with water
- To retard setting
- To improve wear resistance (hardness)
- To offset / reduce shrinkage during setting & hardening
- To cause expansion of concrete and automatic prestressing of steel
- To aerate mortar / concrete to produce a light-weight product
- To impart colour to concrete
- To offset or reduce some chemical reaction
- To reduce bleeding
- To reduce the evolution of heat

**Keywords:** Concrete Admixtures, Admixtures for Concrete, Production of Concrete Admixtures, Manufacturing Cost of Production of Concrete Admixtures, Concrete Admixture Manufacture, Concrete Admixtures Production Line, Concrete Admixtures Equipment, Concrete Admixtures Production Plant, Report on Concrete Admixtures Production, Concrete Admixture Production Plant, Concrete Admixture Manufacturing Process in India, Concrete Admixture Formulation, Formulation of Concrete Admixture, Manufacturing Process of Co

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