



## **IS 8041: 1990 Rapid Hardening Portland Cement — Specification (Second Revision)**

Cement is one of the most important building materials used in the construction industry. It acts as a binding material to bind together different constituents of concrete because of its adhesive properties. Cement is typically produced at cement manufacturing plants either through dry or wet process. The various constituents of cement include lime, silica, alumina, iron oxide, magnesia, sulphite and alkalies.

Considering the prime importance of cement as the building material, Bureau of Indian Standards (BIS) had formulated standards on 16 different types of cement based on their specific applications.

**Rapid Hardening Portland Cement (RHPC)** is a special purpose cement used in concrete to achieve a higher rate of early strength development. RHPC finds applications in precast concrete production, concrete masonry, urgent repair work and cold weather concreting etc. While use of RHPC in concrete, it is expected to have physical properties during the construction as well as during the life of the structure.

**IS 8041** pertains to **Rapid Hardening Portland Cement (RHPC)** and covers the requirements such as its manufacture, physical and chemical requirements, packing, storage and marking. Chemical properties like insoluble residue, magnesia, total sulphur, loss of ignition, LSF and AF content to ensure long term durability of concrete. And the physical properties fineness (more than the ordinary cement), setting time, compressive strength (one day and 3 day) and soundness which help to design the mix of concrete for desired requirements.

Recognizing that cement is a product of mass consumption which needs to be made available to consumers with an assured quality, the government has promulgated the '**Cement**' (Quality Control) Order, 2003. Under the order, all types of cement for which Indian Standards are available have been covered under Mandatory Certification. The ultimate aim of ensuring quality of cement is to produce good quality mortar or concrete.