

Bureau of Indian Standards

Summary of Indian standard

On

Ground Granulated Blast Furnace Slag (GGBS) for Use in Cement, Mortar, and Concrete - as per IS 16714 : 2018

Ground Granulated Blast Furnace Slag (GGBS) enhances the durability and strength of concrete and is utilized as a mineral admixture in cement, mortar, and concrete.

Scope

This standard defines the manufacturing, chemical and physical requirements, storage, and packaging of GGBS for use in cement, mortar, and concrete.

Requirements and Specifications

1. Manufacture:

- GGBS is produced by drying and grinding granulated blast furnace slag.
- May include up to 1.0% non-harmful additives for better surface characteristics.

2. Chemical Requirements:

- GGBS must comply with specific chemical compositions, including limits on MnO, MgO, sulfides, and other constituents as per table 1 of ISS.
- The moisture content of GGBS must be $\geq 1\%$ by mass.
- Glass content must be at least 85%, as verified by an optical microscope.

3. Physical Requirements:

- Fineness of GGBS should be a minimum of 320 m²/kg.
- Slag activity index, measured at 7 and 28 days, must meet specific strength percentages relative to standard OPC mortar cubes.

4. Packaging and Storage:

- Packaging: GGBS should be packed in jute, HDPE/PP woven, or multi-wall paper sacks, or in bulk as per the agreement.
- Storage: Stored in moisture-proof silos or containers to prevent condensation and moisture damage.

5. Marking:

- Each bag or drum must be clearly labeled with the manufacturer's name & address, "Ground Granulated Blast Furnace Slag," net weight, batch number, and the words "Use no Hooks."

6. Sampling:

- GGBS samples must be tested within a week of sampling and stored in airtight containers if testing is delayed.