



Indian Standard IS 16715 :2018 – Ultrafine Ground Granulated Blast Furnace Slag — Specification

IS 16715:2018 sets standards for Ultrafine Ground Granulated Blast Furnace Slag (UGGBS), a finely ground material derived from rapidly cooled molten blast furnace slag. UGGBS is widely used as a supplementary cementitious material to enhance concrete's durability, strength, and environmental performance by reducing the clinker content.

Customers of UGGBS, particularly in construction, seek a material that complies with strict quality parameters to ensure reliable performance in various construction applications. Key quality expectations include **high fineness, controlled particle size, and consistent chemical composition**. *The Indian Standard IS 16715 :2018 – Ultrafine Ground Granulated Blast Furnace Slag — Specification*, addresses these quality expectations by specifying the essential requirements for fineness, particle size and its distribution, chemical composition and slag activity index.

Key parameters defined in the standard include:

- **Fineness:** Minimum 1500 m²/kg using the BET nitrogen adsorption method.
- **Particle Size Distribution:** $D_{50} \leq 5 \mu\text{m}$, $D_{95} \leq 15 \mu\text{m}$ for optimal workability in concrete.
- **Slag Activity Index (SAI):** Minimum of 85% strength at 7 days and 100% at 28 days.
- **Chemical Requirements:** Maximum limits for manganese oxide (5.5%), magnesium oxide (17%), sulphides (2%), sulphates (3%), and chlorides (0.1%).
- **Moisture Content:** Should not exceed 1% by mass.
- **Glass Content:** Minimum 85%, enhancing reactivity in cementitious applications.

IS 16715 ensures these parameters through comprehensive testing methods, packaging, and storage requirements, ensuring the UGGBS provided is high-quality and suitable for construction applications.