



IS 8183: 1993 - Bonded Mineral Wool

Bonded Mineral Wool is a **thermal insulation material** made from mineral fibers like **rock, slag, or glass**, which are processed into fibers and bonded with a resin. This material is highly effective for **thermal insulation, soundproofing, and fire resistance**, making it ideal for use in **buildings, construction, and industrial applications**. It is available in forms such as **slabs, blankets, rolls, and mattresses**, making it suitable for a wide range of applications.

The **IS 8183: 1993** standard sets the parameters to ensure that bonded mineral wool meets stringent quality requirements for thermal performance and safety. The standard outlines the maximum permissible **thermal conductivity**, ensuring that the material provides effective **heat insulation** by minimizing **heat transfer**. The standard defines acceptable **bulk density**, guaranteeing that the material maintains its mechanical strength and thermal performance at various temperatures. The material's **fire resistance** is also addressed, with a requirement that it must be **incombustible**, ensuring safety in high-temperature environments.

Moisture resistance is another key parameter, ensuring that bonded mineral wool does not absorb excess moisture, which could degrade its **insulating properties**. The standard specifies the **shot content**, ensuring the fibers are free of large particles that could affect the uniformity of insulation. The **recovery after compression** requirement ensures that the material returns to its original thickness after compression, maintaining performance over time.

Further, the standard covers **dimensions** (thickness, width, and length) of the material, providing consistency for installation. Additional optional requirements include **resistance to microorganisms, vibration, heat, and alkalinity**, ensuring long-term durability and performance in a variety of environmental conditions.

For **packaging**, bonded mineral wool is packed in **polythene-lined hessian bags or polythene bags** to protect the material during transport and storage. The **marking** on the packaging includes important details such as the **batch number, dimensions, and density** of the material, ensuring traceability and quality assurance.

The products conforming to this standard are eligible to bear the **BIS Mark**, indicating compliance with the **Bureau of Indian Standards (BIS)** and ensuring that the material meets the required safety and quality specifications.

In summary, **IS 8183: 1993** ensures that **bonded mineral wool** provides **effective thermal insulation, fire safety, and long-lasting performance**, offering consumers peace of mind about quality and safety.