



IS 17371:2020 – Geosynthetics — Geogrids for Flexible Pavements

IS 17371:2020, developed by Bureau of Indian Standards (BIS), specifies requirements for **geogrids**—geosynthetic materials used in **flexible** pavements for **reinforcement/stabilization**. These materials, typically made from high-density polyethylene, polypropylene, or polyester, are manufactured in various forms (woven, knitted, extruded, or welded) to reinforce pavement layers such as the **subgrade, subbase, and base**.

Geogrids are expected to deliver strong reinforcement and durability, preventing road deterioration under high traffic and varying environmental conditions. Geogrids shall enhance load-bearing capacity by reinforcing pavement layers. Additionally, Geogrids shall also resist UV exposure, chemicals, moisture, and microbial attack to ensure long-term performance .

IS 17371:2020 classifies geogrids into flexible and rigid types, specifying that each type shall be **non-biodegradable, chemically inert, and UV-resistant** to ensure compatibility with various soil conditions and environmental resilience. The standard specifies molecular weight and carboxyl end group limits for **polyethylene terephthalate (PET)** geogrids to ensure robustness.

Key performance requirements includes, **tensile strength, chemical resistance and dimensional stability** ensuring that geogrids maintain their geometry during manufacturing, transport, and installation. This standard serves as a **specification aid for material selection** rather than a comprehensive design or construction manual.

The Standard provides information regarding the marking requirements for identification and traceability. This standard also specifies the packaging requirements, including the use of **protective wrapping** to safeguard against environmental factors such as moisture, sunlight, and dust. Additionally, it provides guidance on the **safe storage and handling** of geogrids.

The standard specifies sampling methods for geogrid quality control. Each sample is tested for key properties, including tensile strength, elongation, and UV resistance.

The Ministry of Textiles has issued the Geo Textiles (Quality Control) Order, mandating that “Geogrids for flexible pavements” manufactured or imported in India comply with IS 17371:2020 and shall display the BIS Standard Mark.

In summary, IS 17371:2020 provides specifications to ensure that geogrids selected for flexible pavement applications meet the necessary requirements.