



IS 6046: 2023 - GYPSUM FOR AGRICULTURAL USE

Soil health deterioration is increasing at an alarming rate, risking **environment** and **human existence** many ways. **Faulty agriculture** and **land use practices** augment the rate of **soil erosion**, **salinity-sodicity**, and **environmental pollution**. This eventually leads to decline in **agricultural productivity** and **food shortage**. A large chunk of land in India are severely affected by **soil erosion** and **salinity** problems. **Mineral Gypsum for Soil Amendment** is a valuable product used to treat **alkali soils** and improve **agricultural productivity** (1).

The Indian Standard **IS 6046:2023** specifies comprehensive **quality requirements**, including **grading**, **particle size**, and **purity**. This standard defines three grades of gypsum based on the **calcium sulfatedihydrate (CaSO₄·2H₂O) content**: **Grade 1** (minimum 50%), **Grade 2** (minimum 60%), and **Grade 3** (minimum 70%). Gypsum is also required to pass through a 2 mm **sieve** for proper **soil integration**, with at least 50% of the product further passing through a 0.25 mm sieve. The sodium content is strictly limited to 0.75% by mass to avoid **unwanted accumulation in soil**.

To meet consumer expectations for **quality** and **effectiveness in soil treatment**, IS 6046:2023 outlines specific **packaging** and **labeling** standards. The label must include the **manufacturer's name**, **material name**, **net quantity**, **calcium sulfate content**, **particle size**, and **lot number**. This ensures farmers and distributors receive accurate information on **product characteristics**, allowing them to choose the appropriate grade for **soil rehabilitation**.

The standard mandates **sampling** and **testing protocols** to guarantee **product quality**. Sampling follows IS 1289 guidelines, while testing methods, detailed in the annexes, include **gravimetric** and **flame photometer** techniques for determining **calcium sulfate** and **sodium content**. The option for **BIS certification** further assures compliance with **quality** benchmarks, offering consumers **reliable gypsum** that meets **agricultural needs**.

References:

1. IS 6046: 2023 – Indian specification for Gypsum for Agricultural Use
2. Rashmi I et al, HARIT DHARA 5(1) January – June, 2022, pg 11-14.