



ALLIED CUSTOM GYPSUM

PRODUCT DATA SHEET

SOIL SOLUTIONS

SOLUTION GRADE GYPSUM

Solution Grade Gypsum is a white, high purity, finely ground calcium sulfate dihydrate which is used to improve soils in turf grass and agricultural applications. At certain concentration levels, this solution grade soil amendment is readily dissolved in water and is usually delivered through an existing irrigation system to condition calcium deficient soils for enhanced turf grass development.

Benefits

Distributing Solution Grade Gypsum through an irrigation system quickly and efficiently supplies the calcium needed to maintain the soil's salinity at its most productive level. The amount applied depends on the chemical analysis of the water and soil being treated. When calcium sulfate enters the soil matrix it acts to improve calcium availability for ion exchange with sodium and aluminum. Some of the benefits associated with the use of solution grade calcium sulfate for turf grass are:

- **Improved Soil Structure** - Gypsum provides calcium which can flocculate clay soils and reduce the swelling of smectite and open pore spaces improving the penetration of water, air, and roots into the soil.
- **Increased Water Infiltration** – As the soil structure improves, the water infiltration rate and hydraulic conductivity of the soil increases.
- **Crust Prevention**- Using gypsum to increase the electrolyte concentration of the irrigation water can prevent depositional crusts on soil surfaces which can adversely affect water infiltration rates and seed emergence and germination.
- **Better Moisture Retention** - Gypsum helps the soil take in and retain moisture, improving the soil's water-use efficiency which is especially critical in times of drought.

Typical Chemical Analysis

Calcium Sulfate Dihydrate	94.5%
Calcium	22%
Sulfur	17.6%

Typical Physical Properties

Appearance	White Powder
Specific Gravity	2.32
Bulk Density	69 lb/ft ³
Moh Hardness	2.0
pH	7.5

Rate of Dissolution

30 Seconds	97.4%
60 Seconds	100%

Typical Particle Size Distribution

Particles Passing ASTM Sieves

50 Mesh	100.0%
100 Mesh	97.8%
200 Mesh	84.0%
325 Mesh	65.0%

*Certificate of Analysis and MSDS available upon request



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Benefits *(cont.)*

- **Fertilization** – Gypsum supplies bio-available calcium and sulfur, elements vital to proper plant growth and development.
- **Enhanced Nutrient Absorption** - The calcium supplied in gypsum is essential to the biochemical mechanisms by which most nutrients are absorbed. It regulates the balance of micronutrients in grass plants and optimizes the calcium to magnesium ratio in soils.
- **Environmentally Safe** - Solution Grade Gypsum is inert and non-toxic. It is mined from the same gypsum deposit as Allied Custom Gypsum's food and pharmaceutical grade calcium sulfate.
- **Irrigation Effect** - Controlling soil salinity with appropriate water management is especially important because soils with high sodium content do not perform as well as calcium rich soils. Many irrigation sources contain excess salt, which in turn increase the salinity of soils. Soil performance can be improved by including gypsum with irrigation water because the calcium found in gypsum competes with other applications for binding sites in the soil.

Packing Options

Solution Grade Gypsum is packaged in industry standard 50 lb. bags, palletized and stretch wrapped. It is also available in Super Sacks and in bulk.

Transportation Logistics

Allied Custom Gypsum has the ability to provide full traffic and distribution services to coordinate logistical activities involving product delivery in accordance with customer requirements which include FOB and delivered price billing.

Product Quality

Allied Custom Gypsum is vertically integrated in order to be in complete control of all materials and processes responsible for the production of our products. To be sure consistency is maintained, we continuously sample and analyze Solution Grade Gypsum for purity, moisture, and particle size. A certificate of analysis is available upon request for each lot produced.

Customer Service

At Allied Custom Gypsum, we have had a long and successful tradition of service as a supplier of Calcium sulfate to a diversity of industries, attesting to both our desire and ability to meet the needs of our customers. Our processing and grinding facilities offer easy access by either rail or truck. For special requirements, whether it's custom grinding, blending or shipping schedules, we stand ready to serve. Feel free to contact us for any unique needs. That's why we've put the word "Custom" in our name.