PRODUCT TECHNICAL DATA

Soil Water Retention Agent

Product Description

The Soil Water Retention Agent is a new polymer water-absorbing material with strong water absorption and water-retention properties. It can absorb 300-500 times its own weight in water. In agriculture, forestry, water conservancy, the sand industry and related fields, it supports drought resistance and seedling protection, increases yield and income, improves soil, prevents wind erosion and fixes sand, and helps conserve soil and water.

Product Features

- Retains water and nutrients.
- Improves soil structure, including aggregate structure, permeability, aeration and heat capacity.
- Good product stability and long service life.
- High resistance to salinity and alkalinity.
- Toxicological and environmental safety tests show no toxic residues, no environmental pollution and natural degradability.
- Contains abundant potassium and provides good nutritional benefits to soil.

Product Parameters

Item	Specification
Appearance	White granules
Particle size	5-20 mesh
Deionized-water absorption	300-400 times
Absorption in 0.9% saline	≥50 times
Moisture content	≤7%
pH	7-8

Method of Use

1. Seed dressing: first dilute the agent with water to a concentration of 0.5%-1.0%, stir thoroughly to form a hydrogel, mix uniformly with seed, then dry and sow.

2. Hole application: mix the agent with fine dry soil at a ratio of 1:5-10 (or mix with fertilizer), apply evenly in planting holes 10-20 cm deep, then cover with soil and water. Application rate: 2-5 kg/mu. Suitable for hole-planted crops such as tomato, pepper, watermelon, potato and sweet potato.

3. Furrow application: mix the agent with fine dry soil at 1:5-10 (or mix with fertilizer) and apply evenly in a 10-20 cm planting furrow. Application rate: 2-5 kg/mu. Suitable for row crops such as flue-cured tobacco, peanut, rapeseed, radish, wheat, cotton and sorghum.

4. Broadcast application: mix the agent with fine soil at 1:5-10 (or with fertilizer), spread evenly over the soil surface, turn into the top 5-10 cm, water thoroughly, then broadcast seed. Application rate: 6-10 kg/mu. Suitable for broadcast crops such as lettuce and garland chrysanthemum. Turf: 40-60 g/m² on sandy soil and 20-40 g/m² on loam.

Method of Use (continued)

5. Top-dressing for mature trees: following the canopy projection, dig a ring or strip furrow 20-30 cm wide and about 30-50 cm deep, to the point where part of the roots is exposed. Mix the agent uniformly with fine soil or fertilizer and place it in the middle-lower part of the furrow; backfill and irrigate. Dosage: 20-80 g per young tree and 80-200 g per mature tree. Suitable for apple, jujube, pear, peach, walnut and other fruit trees.

6. Root dipping for transplanting young trees: mix the agent with clean water at 1:100-150 to form a gel. Loess may be added to thicken the gel into a slurry. Dip the root system for 3-5 seconds and plant immediately. For transplanting and transport, wrapping with plastic film is recommended.

Application Principles

- Use a reasonable dosage. Too little may fail to provide drought protection and water retention, while too much is wasteful and may not improve results.
- The agent may be mixed with pesticides, chemical fertilizers and plant growth regulators for convenient application and may increase fertilizer and pesticide efficacy.
- Apply uniformly in planting furrows and holes. Do not apply in clumps, which may reduce performance and local aeration.
- The product is not a water-generating agent. Irrigate as required by the soil conditions. Where irrigation is unavailable, apply promptly after thorough rainfall or after the agent has absorbed water to form a gel, and replenish water in a timely manner.
- Select the best application method for the crop and planting method in each region.
- Protect from moisture. Seal any unused portion. Caking after moisture absorption does not affect product performance.

Packaging and Shelf Life

25 kg/bag. Store in a cool, dry place. Shelf life: 3 years.