

# WATER RETAINING **GRANULES**

# ADDED VALUE FOR YOUR FARMING

### **THE SPECIALIST: HIGH-PERFORMANCE SUPERABSORBENT**

# YOUR ADVANTAGES AT A GLANCE

#### AVOIDS DRYING STRESS

POLYSORB consists of a superabsorbent polymer with a storage capacity that can absorb more than 300 times its own weight in water and nutrients. This allows for effective bridging of even prolonged dry periods.

#### SAVES WATER AND FERTILIZER

Water and fertilizers are used more efficiently, allowing savings of up to 50 % on irrigation water and fertilizers.

#### LONG-LASTING EFFECT

The high water and nutrient storage capacity provides a long-term effect in the soil, lasting 3 to 5 years.

#### IMPROVES AND ACCELERATES GROWTH

POLYSORB promotes the healthy development of young plants and seedlings during early growth stages, especially during extended drought periods.

#### PRESERVES PLANT HEALTH

Supports the use of mycorrhizae and other beneficial microorganisms, reducing the need for plant protection agents.

#### FASTER AND HIGHER YIELDS

Promotes root growth and development of young plants, minimizing the risk of plant loss and increasing harvest yields.

#### **IMPROVES SOIL STRUCTURE**

Enhances soil porosity, aeration, and water infiltration, facilitating root growth and reducing water loss through surface runoff.

#### HIGHER MINERALIZATION RATES

Improves the mineralization rate of organic matter in the soil and the stability of soil aggregates.

#### BIODEGRADABLE

POLYSORB is broken down over time by soil microorganisms

#### EASY TO APPLY

Simple to apply either manually or with machinery.



















3 TO 5 YEARS



### LONG-LASTING EFFECT

POLYSORB, a modern superabsorbent polymer, is characterized by its exceptionally high capacity to retain water and nutrients. In soils and substrates, it undergoes repeated cycles of absorption and release of water and nutrients, which remain continuously available to plants.

Its reserves are reliably replenished by rain, irrigation, and capillary water, creating an additional, plant-accessible supply. This reserve ensures healthy and uninterrupted plant growth even during extended dry periods.

Furthermore, the shrinking of the superabsorbent during water release improves soil porosity, thereby supporting optimal root development.

## SIMPLE BUT EFFECTIVE

POLYSORB can be applied either as a dry granulate or as a pre-swollen granulate (hydrogel). (For hydrogel preparation, see the recommendation below.) It should always be placed near the seed or in the plant's root zone, and not applied on the soil surface.

POLYSORB can be applied manually directly into the planting hole. Alternatively, it can be applied using standard fertilizer spreading equipment (for details, see below). It is also possible to mix POLYSORB with seeds after seed coating has been applied.

In addition, POLYSORB is used in planting substrates for the cultivation of seedlings in nurseries or for vegetable production in greenhouses.

## **PREPARATION OF THE HYDROGEL**

To prepare the hydrogel in a larger container, begin filling the container with water using a hose, while slowly and evenly sprinkling POLYSORB into the water stream.

The granulate should be dosed at a granulate-to-water ratio of 1:150 (i.e., 1 kg of granulate per 150 liters of water).

To ensure the superabsorbent has fully swollen and reached its maximum water-holding capacity, complete this process at least two hours before application.



Application in the planting hole as POLYSORB granulate Application in the planting hole as POLYSORB hydrogel

### APPLICATION FOR MANUAL SOWING OR NEW PLANTINGS

For specialty crops and vegetable plants, the planting hole should be at least twice as wide as the root ball or bare roots, and at least as deep as the height of the root ball or roots plus an additional 5 - 10 cm.

After fully digging the hole, place a 5 - 10 cm layer of soil at the bottom, apply POLYSORB into the hole, and lightly mix it with the loose soil. The recommended application rate can be found in the table on the back.

After planting and completely filling the hole, firmly press down the soil with your foot to avoid air pockets and ensure good root-to-soil contact. Finally, water the planting site thoroughly, allowing the water and nutrient reservoir to fill completely.

### APPLICATION DURING MECHANICAL SOWING OR PLANTING – IN IMMEDIATE PROXIMITY TO SEEDS OR PLANTS

#### Field Application Before Stubble Cultivation

Mix the granulate evenly with the fertilizer and apply it broadly using a fertilizer spreader. Immediately afterward, stubble cultivation can be carried out using a disc harrow.

For this type of application, we recommend no-till or reduced-till soil preparation, as conventional plowing may incorporate the granulate too deeply into the soil (e.g., for all types of cereals).

# Soil Application Below and to the Side of the Seed

First, mix the granulate evenly with the fertilizer, then apply it as starter fertilization (placement fertilization) during the sowing or planting process (e.g., corn and potatoes).

#### Seed Application with Seed Treatment

After the seed has been treated with a liquid seed dressing, mix POLYSORB evenly with the seed (e.g., small-grain cereals, soybeans).

#### Application into the Seed or Planting Furrow

Apply the granulate precisely and continuously into the seed or planting furrow using a microgranule applicator mounted on the sowing, planting, or transplanting machine.



### POLYSORB APPLICATION QUANTITIES

Recommended Application Rates for Field Crops in Central and Southern Europe. The dosage depends on the crop type, planting method, and soil type. For hydrogel (pre-swollen granules), 150 ml of hydrogel corresponds to 1 gram of granulate (see the method for preparing the hydrogel above).

Annual Crops	New planting: manual application into planting hole <sup>1</sup>	New planting: continuous mechanical application into planting furrow
Cereals	not applicable	15 – 25 kg / ha
Outdoor tomato, cabbage	1.5 – 1.8 g / per plant	40 – 45 kg / ha
Lettuce <sup>2</sup>	2 – 3 g / per plant	7 – 10 g / meter
Onion	not applicable	35 – 40 kg / ha
Corn, potato, sugar beet	not applicable	35 – 45 kg / ha
Sunflower	not applicable	45 – 50 kg / ha
Pumpkin (edible)	not applicable	100 – 120 kg / ha
Perennial Crops	New and replanting: spot manual or mechanical application into planting hole or furrow <sup>1</sup>	Existing plantations: mechanical application at 30 – 40 cm depth parallel to plant row <sup>2</sup>
Asparagus, hops	35 – 45 kg / ha	not applicable
Grass mixtures, lucerne (fodder)	44 – 55 g / m²	not applicable

 $^{\eta}$  Lighter soils may require higher application rates than heavier soils.  $^{2}$   $^{2}$  Per linear meter.





#### DISTRIBUTION

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