



I • CAT

“CHANGE THAT DOESN'T COST THE EARTH”

PLANTING SOLUTIONS

EXL-GEL[®]

WATER RETAINER



A K-based super absorbent polymer, acting as a soil conditioner and a water reservoir.

WITHOUT EXL-GEL[®]

Water losses due to percolation and evaporation.

Inefficient use of nutrients due to leaching.



WITH EXL-GEL[®]

Water and nutrients remain available in the root zone.





EXL-GEL[®]

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Can absorb water up to 300 times its own weight and retain it under moderate pressure conditions.

Bio-degrading period: 1 – 5 years depending on environmental conditions and soil types.

Reduces leaching of irrigation water, nutrients and fertilizers.

Reduces plant stress at the time of planting, especially during times of drought or limited water supply.

Material is compatible and mixable with substrates, soils, microbes, humic acids and a broad variety of fertilizers.



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FIELDS OR APPLICATIONS:

- Forestry.
- Agriculture.
- Commercial horticulture.
- Landscaping.
- Reforestation.
- Sod and seeding of grass.
- Soil rehabilitation.
- Nurseries and production plants (growers).
- Inner-city ornamentals and barriers.

EXL-Gel® performs best in soils with low water-holding capacity, such as sandy, sandy loam, and loamy sand soils.

EXL-GEL® enhances soil moisture retention by creating small water reservoirs that remain available until absorbed by plant roots.

EXLGEL® acts as both a soil conditioner and fertilizer aid, supporting the long-term preservation of moisture for trees and various crops during transplanting and growth stages, while providing a steady release of water and micronutrients.





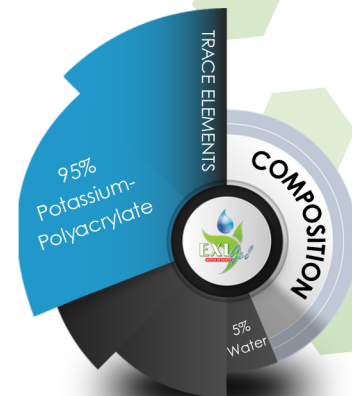
EXL-GEL®

WATER RETAINER

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Physical Properties

Physical state	Powder
Colour	White
Particle size distribution	0.2mm - 2mm
pH	7.58 - 7.7
Water retention	1g <= 125ml
Active ingredient	Potassium polyacrylate polymer
Minor elements	Iron, Boron, Manganese, Copper, Zinc, Nitrogen, Calcium
Major elements	20% Potassium



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EXL-GEL® Application Guide

APPLICATION	DOSAGE RATE	APPLICATION METHOD
Groundcovers / Planting Beds	50 – 100 g/m ²	Dig EXL-GEL® into the soil to a depth of 10–15 cm depending on root depth and water thoroughly. Heavy soils require lower rates, sandy soils higher rates. Large areas may be power rotated
Turfgrass	25 – 100 g/m ²	Apply EXL-GEL® with a drop seeder and rotovate to a depth of 10–15 cm in two directions. Water immediately after sowing to saturate the polymer granules.
Trees (Evergreen) - Applied as dry granules	400 g/m ³	Mix EXL-GEL® into the backfill below and around the root ball and water thoroughly.
Trees (Deciduous) - Applied as dry granules	800 g/m ³	Mix EXL-GEL® into the backfill below and around the root ball and water thoroughly.
Shrubs – 3.5 L Pots - Applied as dry granules	15 g/plant	Mix EXL-GEL® into the backfill below and around the root ball and water thoroughly.
Shrubs – 8.0 L Pots - Applied as dry granules	30 g/plant	Mix EXL-GEL® into the backfill below and around the root ball and water thoroughly.
Shrubs – 20.0 L Pots - Applied as dry granules	60 g/plant	Mix EXL-GEL® into the backfill below and around the root ball and water thoroughly.
Shrubs – 40.0 L Pots - Applied as dry granules	120 g/plant	Mix EXL-GEL® into the backfill below and around the root ball and water thoroughly.
Forestry Plantations (Dry Granules)	2 – 3 g per seedling	Mix EXL-GEL® throughout the planting hole. Plant normally and irrigate immediately after planting to saturate the polymer granules with water.



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EXL-GEL® Application Guide

APPLICATION	DOSAGE RATE	APPLICATION METHOD
Forestry Plantations (Pre-Wetted Gel)	400 – 600 ml per seedling	Fill 200 L of water into a drum. Add 1 kg EXL-GEL®, allow to swell for 30 minutes, then mix the solution throughout the planting hole. Plant in the usual way.
Horticultural Substrates (Dry Granules)	1 – 2 kg/m³	Mix dry EXL-GEL® homogenously with the growing media. The first irrigation must be very intensive to saturate the polymer granules with water.
Horticultural Substrates (Pre-Wetted Gel)	1 – 2 kg/m³	Pre-hydrate EXL-GEL® and mix it homogenously with the growing media: Fill 100 liter of water into a drum, add 1 kg of EXL-GEL®, stir the solution for 30 minutes and let it settle for 15 minutes. Pre-hydration of EXL-GEL® can also be carried out in a fertilizer solution.
Agricultural Crops (Broadcast Application)	80 – 100 kg/ha	Scatter the EXL-GEL® by hand or with a fertilizer spreader before sowing or planting. Plough up the soil. Working-in depth: 15 cm.
Agricultural Crops (Furrow Application)	20 – 40 kg/ha	Place the dry EXL-GEL® granules together with fertilizer in the seed/plant furrow.
Root Dipping	100 g per 10–20 L water	Stir EXL-GEL® slowly into moving water. Allow to stand for at least 20 minutes. Adjust the slurry to the thickness that best adheres to the roots. Dip in or spray roots with the gel either singly or in bunches. Plant out into the soil in the usual way.
Soil Injection	As required	Inject EXL-GEL® directly into the root zone of established trees using a suitable soil injection system. The injector pulses by means of high air pressure to inject EXL-GEL® into the soil with precisely targeted depth ranging from 20 - 120 cm. The injector gently penetrates hard soils without damaging the roots placing EXL-GEL® in direct contact with the roots.

Improve water retention, reduce irrigation frequency, and support healthier plant growth across agricultural, horticultural, landscaping, and forestry applications.

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PREPARATION AND APPLICATION OF SLURRY

Water containing dissolved salts (like lime in borehole water) should be treated with with a surfactant before mixing with the product.



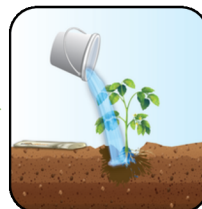
Mix EXL-GEL® with water (allow slurry to form).



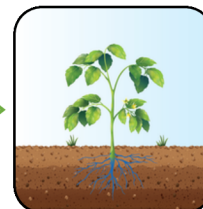
Add 1/5 of slurry to the prepared planting pit and mix with soil.



Add the plant to the prepared pit.



Add soil around the plant followed by 3/5 of the slurry and mix together



Finish by covering the surface with last soil and water thoroughly.

PREPARATION AND APPLICATION OF GRANULES

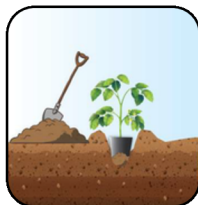
Soil should be dry to prevent product from forming clods when mixing with the substrate.



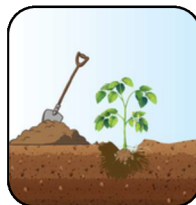
Mix EXL-GEL® with soil / planting medium.



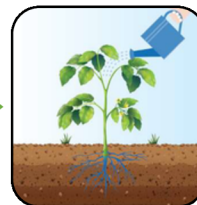
Prepare the planting pit.



Add 1/5 of the prepared granule mixture to the pit. Add the plant to the pit.



Add the remaining granule mixture around the plant.



Finish by covering the surface with the last soil and water thoroughly.



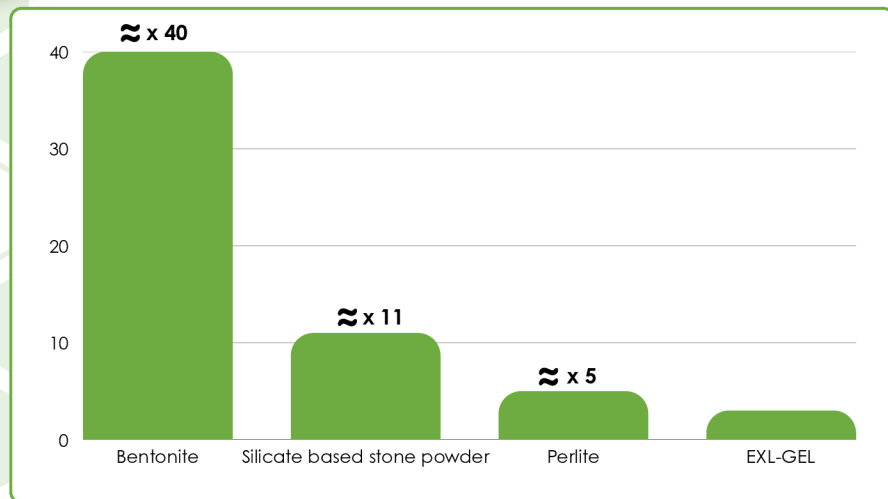
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COST BENEFIT OF EXL-GEL[®]

Cost comparison for thickening 10Ltr of water:



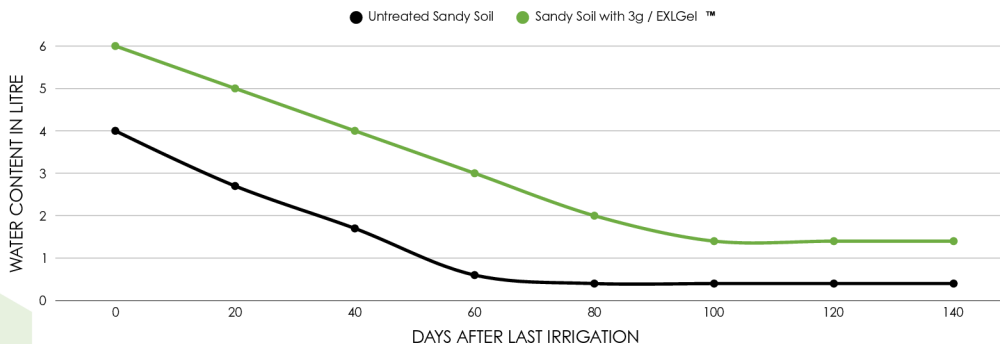
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INFLUENCE OF EXL-GEL® TREATMENT

The soil moisture potential is kept for a longer period of time (twice as long) at a higher level, resulting in less drought stress for the plants. Therefore the irrigation frequency can be reduced by up to 50 %.



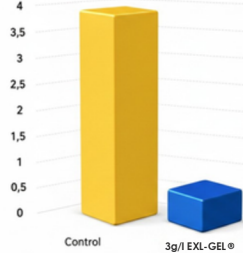


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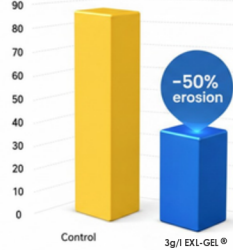
l/m^2



SURFACE WATER RUNOFF

Water loss by surface runoff at a slope of 20° ; precipitation 30mm/h for 20 minutes

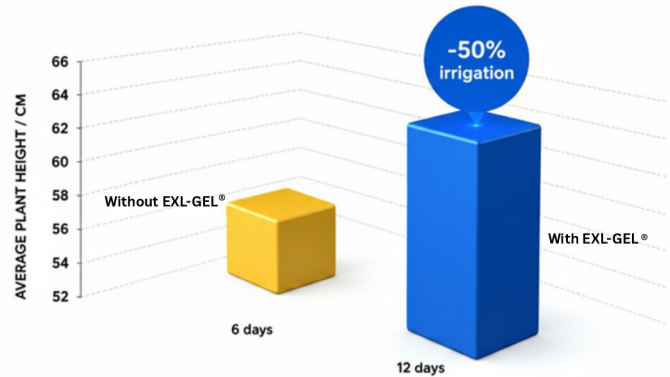
g/m^2



SOIL EROSION

Water loss by surface runoff at a slope of 20° ; precipitation 30mm/h for 20 minutes

REDUCTION OF IRRIGATION FREQUENCY





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ENVIRONMENTAL SOLUTIONS IN



FIRE



DUST



PLANTING

I-CAT IS A



COMPANY



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