

POWERDRIP NPK 7-40-0 + TE

Concentrated phosphorus starter

Product family: Fully water-soluble NPK fertiliser with trace elements

Intended use: Rooting, flowering support and rapid correction where potassium input is not required.

Document status: Technical data sheet for commercial and agronomic guidance.

1. Product overview

POWERDRIP NPK 7-40-0 + TE is a concentrated crystalline NPK fertiliser formulated for fertigation and foliar programmes. Its 7-40-0 nutrient ratio is selected for concentrated phosphorus starter. The formulation supplies readily available nitrogen, phosphorus and potassium together with low-dose trace elements to support enzyme activity, chlorophyll formation and balanced crop development.

2. Guaranteed analysis and physical specification

Parameter	Guaranteed content / specification
Total Nitrogen (N)	7% w/w
Water-soluble Phosphorus Pentoxide (P ₂ O ₅)	40% w/w
Water-soluble Potassium Oxide (K ₂ O)	0% w/w
Boron (B)	0.02%
Copper (Cu), chelated	0.01%
Iron (Fe), chelated	0.05%
Manganese (Mn), chelated	0.03%
Molybdenum (Mo)	0.001%
Zinc (Zn), chelated	0.02%
Physical form	Free-flowing water-soluble powder
Solubility	Designed for complete dissolution in clean irrigation water
Chloride	Low-chloride formulation; verify market-specific declaration on final batch COA

3. Agronomic function

- Nitrogen (7%): supports amino-acid, protein and chlorophyll formation and maintains active canopy development.
- Phosphorus pentoxide (40%): supports energy transfer, root activity, flowering and early reproductive development.
- Potassium oxide (0%): regulates water balance, assimilate transport, stress response, fruit filling and quality.
- Trace elements support metabolic pathways and help prevent hidden micronutrient hunger when used within a complete nutrition programme.
- The fully water-soluble format is suitable for drip, sprinkler and compatible foliar systems after filtration.

4. Recommended crops and programme position

Suitable for vegetables, protected crops, orchards, vineyards, berries, ornamentals, nurseries and field crops. Use the formula as one component of a crop-specific fertilisation programme based on soil, irrigation-water and tissue analysis.

5. Indicative application guidance

Application route	Indicative rate	Programme position
Fertigation - vegetables	2-5 kg/ha/application	Early establishment, root development, pre-flowering
Foliar spray	150-300 g/100 L water	2-3 applications at 7-14 day intervals
Nursery / transplant solution	0.5-1.5 g/L	Apply to moist media; avoid excessive EC
Fruit crops	2-4 kg/ha/application	Before flowering and during early fruit set

6. Preparation and application

- Fill the mixing tank to one-half or two-thirds with clean water and start agitation.
- Add the required product gradually; maintain agitation until fully dissolved.
- Complete filling with water and apply through a correctly calibrated system.
- For stock tanks, confirm solubility and compatibility at the intended concentration and water temperature.
- Flush fertigation lines after use and avoid allowing concentrated solution to dry in filters or emitters.

7. Compatibility and jar testing

Do not mix concentrated phosphate fertilisers directly with calcium-containing concentrates. Separate A/B stock tanks are recommended. Before combining with pesticides, biostimulants or unfamiliar fertilisers, perform a small jar test using the actual irrigation water. Observe for heat, gas, sediment, gel formation or persistent cloudiness. Apply only stable mixtures promptly.

8. Water quality and operational controls

- Check source-water pH, bicarbonate, EC and hardness before preparing concentrated stock solutions.
- Use filtration appropriate to emitter size and system design.
- Do not exceed crop or substrate salinity tolerance; split applications where EC is limiting.
- Adjust dose according to crop stage, yield target, climate, root-zone volume and background nutrient supply.

9. Storage, packaging and shelf life

Store tightly closed in the original moisture-resistant package, under cover, away from direct sunlight, humidity, heat and incompatible materials. Prevent bag damage and water ingress. Typical commercial packs may include 1 kg, 5 kg, 10 kg and 25 kg, subject to market. Target shelf life is 3 years in unopened original packaging when stored correctly; final label and batch documents prevail.

10. Quality and regulatory note

Guaranteed analysis must be confirmed against the released batch COA. Registration, label wording, nutrient expression, tolerances and permissible claims vary by destination market. This TDS is not a substitute for the product label, final SDS, local registration dossier or agronomic advice based on analysis.