

# TECHNICAL INFORMATION GUIDE



**PROPLANT™** is a trademark of Agriphar, Belgium  
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*This folder is strictly informative, the user must follow the guidelines of the original label.*



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## 1. Biological spectrum

**PROPLANT™** is a soluble concentrate fungicide containing propamocarb-hydrochloride. It is a systemic fungicide for preventive use especially active against Oomycetes fungi of the genera *Pythium*, *Aphanomyces*, *Phytophthora*, *Peronospora*, *Pseudoperonospora* and *Bremia* causing damping-off, root and stem rot, leaf blight, fruit rot and downy mildew. It is applied as a preventive soil drench or by soil incorporation, seed dressing, dipping of bulbs and roots or foliar spraying.

Propamocarb-hydrochloride is especially approved for use on ornamentals and horticultural crop in many countries.

The mode of action of propamocarb-hydrochloride differs from that of other commonly used systemic Oomycete fungicides. Fungal strains which have become widely resistant to other groups of fungicides are also controlled.

Propamocarb-hydrochloride is not phytotoxic to many crops regardless of their growth stage, from propagation to fully grown plants and can be used on crops grown under glass or plastic as well as in nurseries and in field crops. Such use has been shown to stimulate plant growth, vigor, rooting and blooming.

When used as directed, propamocarb-hydrochloride has no harmful effects on bees or earthworms and does not contaminate groundwater. After soil application, propamocarb-hydrochloride remains in the root zone and that which is not taken up by plants is decomposed to natural by-products by soil micro-organisms.

**PROPLANT™** protects the seed during germination, the young plants and cuttings against root and stem rot due to Oomycetes fungi. In humid soil, the product is well absorbed through the roots and transported acropetally. Sprayed on the leaves, **PROPLANT™** shows a local systemicity.

## 2. Method of application

**PROPLANT™** must be applied preventively either as a soil drench or by incorporation into soil or compost to protect germinating seeds, seedlings, cuttings, pot or container plants and transplants of ornamentals, vegetables, tobacco, strawberries and woody plants. **PROPLANT™** is also suitable for application through drip irrigation systems and also in soilless cultivation.

For maximum protection, **PROPLANT™** has to be applied before or immediately after sowing, before pricking out seedlings or striking cuttings and immediately after transplanting, potting on or re-potting plants.

**PROPLANT™** is absorbed by the roots and translocated to all parts of the plant. Activity lasts for up to 8 weeks, depending on dosage, application technique, soil type and climatic conditions.

To achieve maximum distribution and effectiveness, soil or compost must be moist. For drenching, sufficient water volume must be used to allow propamocarb-hydrochloride to penetrate thoroughly the rooting zone. The quantity applied depends on the type of soil and the depth and size of the rooting zone.

**PROPLANT™** should not be applied to dry soil or compost. Treated soil must be kept under normal moisture conditions to enable continuous absorption by the roots. For simultaneous control of other soil fungi such as Rhizoctonia, Thielaviopsis, Fusarium or Verticillium the addition of 1 g ai benomyl or 3,2 g ai thiophanate-methyl to 10 l **PROPLANT™** solution is recommended.

### 3. Rates of application

- Ornamentals

During the sowing : apply 5 to 10 ml/m<sup>2</sup> of **PROPLANT™** by watering on seedling bed. Treat before the sowing for the seeds which will not be recovered and after the sowing for the ones which will be recovered.

At the pricking out : apply 10 to 15 ml/m<sup>2</sup> of **PROPLANT™** by watering on soil before the pricking out.

At the cutting : apply 10 to 15 ml/m<sup>2</sup> of **PROPLANT™** by watering on soil before the cutting. The recommended water quantity range from 1 to 5 l/m<sup>2</sup> depending on the humidity degree of the soil before the treatment and the deepness of the substrate.

For the control of Phytophthora spp, it is recommended to use the higher dosage.

#### Selectivity :

On plant of unknown tolerance, test first on a small scale.

**PROPLANT™** may be applied to the following ornamental species :

*Acalypha hispida, Adiantum, Aechmea fasciata, Ageratum, Alyssum, Alstroemeria, Anthurium andreaum, Anthurium scherzerianum, Antirrhinum, Asparagus plumosus, Asparagus sprengeri, Azalea, Begonia semperflorens, Begonia tuberhybrida, Brufelsia calycina, Calceolaria, Calendula, Callistephus, Calluna, Carnation, Chamaecyparis, Cheiranthus, Chlorophytum, Chrysanthemum indicum, Chrysanthemum segetum, Clematis, Codiaeum variegatum, Coleus, Cornus, Cotoneaster, Crocus, Cyclamen, Dahlia variabilis, Delphinium, Dianthus, Dieffenbachia, Dipladenia, Dizygotheca elegantissima, Erica gracilis, Euphorbia fulgens, Euphorbia pulcherrima, Fagus, Fuchsia, Gaultheria procumbens, Gerbera jamesonii, Hedera helix, Helichrysum, Heliotropium, Hibiscus, Hippophaë, Hyacinthus, Hypocyrtha glabra, Impatiens, Iris, Kalanchoe, Lilium, Lobelia,*

*Matthiola, Mesembryanthemum, Monstera deliciosa, Nemesia, Paphiopedilum, Perlargonium grandiflorum, Perlargonium peltatum, Perlargonium zonale, Peperomia, Polypodium, Primula acaulis, Primula obconica, Primula veris, Ranunculus, Rhabdophora, Rhododendron, Rosa, Saintpaulia, Senecio cruentus, Sequoia, Sinningia speciosa, Solanum capsicastrum, Streptocarpus, Tagetes, Tilia, Tulipa, Verbena, Viburnum, Viola tricolor, Vriesea splendens, Zinnia.*

- **Vegetables**

**Tomatoes, cucumbers, gherkins, egg-plants, courgettes, melons, peppers** under glass in order to avoid *Pythium* and *Phytophthora*.

Before planting : by watering on plants and on seedling bed.

Dosage : 100 ml of **PROPLANT™**/100 l water. Use 5 litres solution/m<sup>2</sup>.

Just after planting : by watering at the base of the plant just after the planting.

Dosage : 100 ml **PROPLANT™**/100 l water. Use a sufficient quantity of solution by plant. Repeat the treatment after 2 weeks if necessary.

**Cabbages** (expect cauliflowers) : to control *Peronospora parasitica*

Dosage : spray 50 ml **PROPLANT™**/100 m<sup>2</sup> on the seedling bed, as soon as the symptoms of the disease appear. Use a lot of water. Repeat, if necessary, the treatment after 2 weeks.

**Cauliflowers** : to control the *Peronospora parasitica*

Spray 3 l **PROPLANT™**/ha in min. 500 l/ha water at least 2 weeks after planting.

**Salad and endive** : to control the *Bremia lactucae*

Mache : to control the *Bremia lactucae*

Spraying 1,5 l of **PROPLANT™**/ha as soon as symptoms of the disease appear. Repeat the treatment after 10 days if necessary.

**NFT Chicory (Witloof)** : to control *Phytophthora spp.*

Dilute 12.5 ml of **PROPLANT™**/100 l of solution at the beginning of forcing when the boxes are filled with roots

**Tobacco seedbed** : 50 ml **PROPLANT™**/10 m<sup>2</sup> on the seedling bed using a lot of water .  
Drench treatment 1 week before plant transplanting : 9 to 15 ml/m<sup>2</sup> at 0.15 % concentration.

**Turf**: For the control of *Pythium* blight in turf, **PROPLANT™** is recommended as follows:

Preventive : 50 ml/m<sup>2</sup> in 10 to 20 l water/100 m<sup>2</sup>

Curative : 120 ml/m<sup>2</sup> in 10 to 20 l water/100m<sup>2</sup>

Repeat treatment every 7 to 10 days.

### 4. Pre-harvest interval

To avoid excessive residue at harvest, do not exceed the maximum rates per ha and the pre-harvest interval. Follow the directions of local authorities.

### 5. Crop safety/restrictions

Maximum number of treatments 4 per crop for listed edible crops (2 per crop for outdoor radishes). When applied over established seedlings rinse off foliage with water and do not apply under hot, dry conditions. Do not treat young seedlings with overhead drench. On plants of unknown tolerance test first on a small scale.

### 6. Safety precautions

The product is a very low acute toxic. Observe the general rules for handling crop protection chemicals :

- Keep out of reach of children, away from food, drink and animal feeding stuffs.
- When using do not eat, drink or smoke.
- Wash concentrate from skin or eyes immediately.
- Wash hands and exposed skin before eating, drinking or smoking before meals and after work.
- Keep only in the original container, tightly closed in a safe place.

### 7. Storage and disposal

- Store away from frost.
- Do not contaminate ponds, waterways or ditches with chemical or used container.
- Do not reuse empty container for any other purpose.
- Wash out container thoroughly, empty washings into spray tank and dispose of safely. (by burning, taking care to not breathe smokes)

### 8. Emergency guidelines

#### Symptoms of poisoning

Propamocarb-hydrochloride is a carbamate causing cholinesterase inhibition. The symptoms of intoxication may be malaise, headache, dizziness, mild ataxia, nausea, emesis, salivation, profuse sweating, diarrhea, stomachache and mild miosis. In severe case : systemic convulsions, pulmonary edema, hypertension and incontinence.

### First aid

- *In case of skin contact* : Remove contaminated clothing immediately. Wash contamination from skin with soap and clean water.
- *In case of eye contact* : Irrigate eyes with clean water for at least 15 minutes.
- *If swallowing has occurred or is suspected* : Induce vomiting if person is fully conscious and seek medical advice immediately. Show this technical data sheet or label where possible. Administration of gastric lavage with activated charcoal is recommended.

### 9. Note to physician

Atropine sulphate should only be administered in case of obvious cholinesterase inhibition. Treatment should otherwise be supportive and symptomatic after appropriate decontamination.