

MENNO Florades®

Special Disinfectant for Horticulture – without gas phase

Spectrum of effectiveness:

- **Fungi (including duration forms):** Agaricus, Alternaria, Aspergillus, Botrytis, Cercospora, Chalara, Colletotrichum, Cylindrocladium, Dactylium, Fusarium, Helminthosporium, Mucor, Ophistoma, Peronospora, Pythium, Phytophthora, Ramularia, Rhizoctonia, Rhizopus, Streptomyces, Thielaviopsis, Trichoderma, Verticillium, etc. ...
- **Bacteria:** Acidovorax, Agrobacterium, Clavibacter, Erwinia, Pseudomonas, Ralstonia, Xanthomonas, etc. ...
- **Virus:** ArMV, BePMV, CarMoV, CGMMV, CMV, CyMV, MNSV, ORSV, PepMV, PFBV, PLCV, PLPV, PMMoV, PVX, PVY, RMV, TBRV, TMV, ToMV, TSV, TSWV, ZyMV, etc. ...
- **Viroids:** PSTVd, CSVd, etc.

Application: After intensive (mechanically) cleaning.

- Watering of standing areas, tiding-installations and dipping of pots etc.: preventive before using.
- Immersion (dipping) of knives, pots and equipment: preventive before using.
- Volume for standing areas: ebb-and-flow benches (tiding installations) 0,2 l/m² / irrigation mats 2 l/m²

Concentration of application and reaction time:	Hard surfaces, pots	knives, equipment
Virus (ArMV, PFBV, PLCV, PLPV, TBRV, TSWV, CGMMV, etc.)	1 % / 16 h	2 % / 3 min.
Virus (ORSV, CyMV and PepMV)	2 % / 16 h	3 % / 3 min.
Virus (TMV and ToMV)	4 % / 16 h	3 % / 3 min.
Bacteria and Fungi	1 % / 16 h	1 % / 3 min.
Viroids (PSTVd)	3 % / 1 h	1 % / 3 min.

Important: When dipping knives and equipment in the MENNO Florades® solution it is important to keep the pH of the dipping solution below 4.5. Monitor with pH-paper. If pH is above 4.5 add more MENNO Florades® to reduce pH (e.g. 200 ml of MENNO Florades® / 100 litres water to reduce pH by ca. 0.5).

Reaction time: For optimal disinfection of some fungal spores on pots and trays immersion of up to 16 hours is recommended. On hard surfaces and on mats the reaction time is already finished after drying.

Plants can be safely placed back onto / into these surfaces when the surface is dry.

- To guarantee a reliable effectiveness, the solution for immersion must be tested with indicator paper, depending on the intensity of using.
- Knives (minimal 5 pieces) dipping in a rotation stand of a solution for immersion need enough reaction time – solution for immersion should be exchanged every day.
- Pots / trays in a solution for immersion – for the period of the reaction time the pH value should be tested with pH indicator paper – dirty solution for immersion should be exchanged every day – normally, depending on the intensity of using, the solution for immersion should be exchanged after 1 to 2 weeks.

MENNO Florades® – plant tolerance

In extensive tests it was shown, that MENNO Florades® has an exceptional good plant tolerance:

Owing to the variations in growing conditions and the many different species and varieties of ornamental plants or cultivars, we can not make any binding general statement about plant tolerance or phytotoxicity of MENNO Florades. We accept no liability for the risk of application. We therefore recommend performing a tolerance test on a small number of plants - especially in the case of produce ready for sale - at the relevant stage of growth before the whole batch is treated.

Virus infections – the problem of recognizing?

In extensive tests and a big number of publications the new situation on the problematic of virus infections also in the floriculture was pointed out. Because of the highly infectious behaviour of virus it is necessary to have an intensive hygienically management. Therefore all ways of infection must be focused by view: e.g. knives, hands, insects, water, drop dead plant material, equipment, pots, table, doormats etc.

Virus infections are difficult to diagnose. For example (too much or too less) nutrient, light, water, temperature or humidity are hold responsible for this.

In case you are not sure, please contact the responsible Plant Protection Research Centre, where you can ask for the analytically research on the appeared symptoms.

For more informations and literature please ask for:

MENNO CHEMIE-VERTRIEB GMBH

Consultation and sales: