

MENNO Florades®

Special Disinfectant for Horticulture against:
Fungi, Bacteria,
Viruses and Viroids:

The unique BACTERICIDE, FUNGICIDE, VIRUCIDE
effective according EPPO guidelines



Effective very fast in 3 minutes, even longer after 60 minutes and very long up to 16 hours, if necessary

MENNO Florades®

- For all hard surfaces, such as: ebb and flow areas, standing areas, textiles, clothes, shoes, ground gutters, covers, pots, trays, boxes, crates, warehouse, equipment, machineries, cutting tools etc.
 - **ACTS VERY FAST**
 - **ACTS LONG LASTING**
 - **ACTS RELIABLY AGAINST PHYTOPATHOGENIC**
- Active ingredient: Benzoic acid 90 gram/litre
 - No gaseous hazards during use
 - Good material compatibility
 - Exceptional good plant tolerance
 - Due to the application no waiting period (F) and not dangerous to bees (B3).

Use disinfectant carefully. Always read the label and product information before use and observe national regulations.

MENNO Florades®

Special disinfectant against phyto pathogen germs (fungicide, bactericide and virucid) for floriculture, horticulture (Vegetable production) and agriculture (Potato and Tobacco). For professional users only.

Spectrum of effectiveness:

- **Fungi (inclusive spore forms):** Alternaria, Aspergillus, Botrytis, Cercospora, Chalara, Colletotrichum, Cylindrocladium, Dactylium, Didymella, Erysiphe, Fusarium, Helminthosporium, Mucor, Neonectria, Ophistoma, Peronospora, Pythium, Phytophthora, Podosphaera, Ramularia, Rhizoctonia, Rhizopus, Streptomyces, Thielaviopsis, Trichoderma, Verticillium etc.
- **Bacteria:** Acidovorax, Agrobacterium, Clavibacter, Curtobacterium, Dickeya, Erwinia, Pectobacterium, Pseudomonas, Ralstonia, Rhizobium, Robbsia, Xanthomonas etc.
- **Virus and viroid's:** ArMV, BePMV, CarMoV, CGMMV, CMV, CyMV, MNSV, ORSV, PepMV, PFBV, PLCV, PLPV, PMMoV, PVX, PVY, RMV, TBRV, TMV, ToBRFV (Tomato brown rugose fruit virus), ToBRV, ToMV, TSV, TSWV, ZYMV, PSTVd (potato spindle tuber viroid), CSVd (chrysanthemum stunt viroid) etc.

Application: After the last use or before each reuse. After thorough, mechanical cleaning.

- Maximal treatments: 1 / No direct treatment of the plants / for disinfection purpose.
 - Technique: Watering of standing area and container /resp. flooding of sealed flat, non-profiled standing areas / resp. dipping of cutting tools / resp. coarse spray or foaming of hard surfaces like standing areas, containers, pots, trays, boxes, walls, machines, equipment etc.
 - Expense amount of mixture: 0,8 Litre/m² (maximal amount) for floriculture, horticulture resp. agriculture.
- MENNO's recommendation of effort: Volume for standing area: ebb-and-flow benches (tiding installations) 0,2 L/m² / irrigation mats up to 0,8 L/m² / for potato warehouse area: boxes, equipment, machinery etc.: 0,4 - 0,8 L/m²
- Exposure time: 16 hours - 1 % resp. 4 hours - 2 % against phyto pathogen bacteria and fungi / 16 hours against virus and viroid's - 1 % against „simple inactivating pathogens“, 2 % against „reasonable inactivating pathogens“, 4 % against „serious inactivating pathogens“ / 3 minutes - 4 % for cutting tools.

MENNO's recommendation of exposure time: On hard surfaces and on mats the reaction time is already complete after drying e.g. over night.

- **The exposure time is specific to the pathogen and could may be reduced / demand by the manufacturer.**
- The waiting time (F) is covered by the application conditions and / or the vegetation period which remains between application and use (e.g., harvesting), or the setting of a waiting time in days is not required.
- Bees are not endangered due to the use of the product as defined by the authorization (B3).
- The product is classified as not harmful to populations of relevant beneficial insects.

Concentration of application and reaction time: Cutting tools 4 % / 3 minutes	All other hard surfaces
Virus and viroid's (simple inactivating pathogens: ArMV, BePMV, CarMoV, CMV, CSVd, CyMV, PLCV, PSTVd, PLPV, TBRV, TSWV, RMV etc.)	1 % / 16 hours
Virus and viroid's (reasonable inactivating pathogens: MNSV, PepMV, PFBV, ZYMV etc.)	2 % / 16 hours
Virus and viroid's (serious inactivating pathogens: ToBRFV, TMV and ToMV)	4 % / 16 hours
Bacteria and fungi (in floriculture, horticulture and agriculture)	1%/16 hours resp. 2%/4 hours

MENNO - Manufacturer's recommendations:

- Dip of cutting tools; keep pH of the dip below 4.5 (only adding MENNO Florades® to the dip). Monitor pH, and if pH getting up 4.5 add MENNO Florades® to reduce pH again (e.g. 200 ml of MENNO Florades® /100 litres water will reduce pH by about 0.5). Do not add any other acidic compounds, as far as organic or inorganic acids! Intensively used dips should be checked more frequently, if necessary, renew every day in order to ensure sufficient efficacy. Use of rainwater reduces product consumption.

Place cutting knife (minimum 5 pieces) in a rotary stand of a dip in order to ensure the 3 minutes exposure time.

- Plants can be safely placed back to hard surfaces after dry off immediately.
- Flush dripper-hosepipe for disinfection, and flushing with fresh water afterwards.
- **Application times may vary depending on the application - MENNO documentation upon demand:**
 - **3 minutes** for cutting tools as dip against all viruses, bacteria and fungi (vegetative forms)
 - **5 minutes** against bacteria as surfaces application even in the presence of peat pollution
 - **10 minutes** for textiles / clothing against non-enveloped tobamoviruses (e.g. ToBRFV, CGMMV etc.)
 - **60 minutes** with 4 % against non-enveloped viruses CGMMV or ToBRFV - (on smooth surfaces)
 - **60 minutes** against fungi (spores) or from 4 hours otherwise up to 16 hours - depending on their spore forms - if required

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

- Disclaimer: No damage to ornamental plant cultivation or vegetable cultivation is known for proper application. Cucumber production areas must be heated up and ventilated sufficiently before cultivation. We do not assume the application risk. We accept no liability for the risk of any indication. We recommend carrying out a compatibility test before bringing cultures or products into contact with disinfected surfaces.

MENNO CHEMIE-VERTRIEB GMBH

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