

nemycel® phorid fly **Control of Phorid fly larvae**

nemycel® phorid fly contains entomopathogenic nematodes of the *Steinernema* species for biological control of phorid larvae in mushrooms.

Storage

nemycel® phorid fly should be used as soon as possible upon delivery. The package may be stored for a limited period of time at 2 to 8°C (see expiry date on package). It should never be frozen or exposed to temperatures higher than 30°C.

Application conditions

The nematodes are infective at compost temperatures up to 30°C. At higher temperatures, nematode efficacy decreases. The casing should be moist but not wet. Nematodes cannot swim and therefore cannot move in a water-saturated casing. nemycel® phorid fly can be applied by either mixing directly into the casing or as drench using a watering tree or a sprayer.

Application

Phorid larvae or adults should be present in the compost at application to enable nematodes to multiply in the insects.

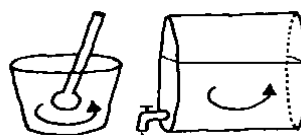
Apply 1.6 million nematodes per m² at casing or immediately afterwards, at latest on day 2.

Repeat the application with first watering on first flush 18-20 days after casing.

Package Size	Treated Area
250 million	150 m ²
500 million	300 m ²

Adjust dose rate accordingly for other areas.
Higher dose rates do not impair efficacy.

Mix the solution thoroughly for 3 minutes and continue mixing during spraying to avoid sedimentation of the nematodes!



Compatibility

nemycel® phorid fly can be tankmixed with SporGon or Vivando.

Sodium hypochlorite at a concentration of 0.05 % has no effect.

Chlorine up to 50 mg per liter of water has no effect.

Hydrogen peroxide should be applied 3 days before or after nemycel application.

nemycel® phorid fly is delivered on an inert carrier. It dissolves in water and forms a suspension that is easily applied to the crop. If a sprayer is used, clean it thoroughly before use, especially if you have sprayed nematicides. Remove all sieves. Use nozzles with at least 0.8 mm diameter. Pressure should not exceed 5 bar.

For any questions ask your supplier or send us an email at mushroom@e-nema.de

e-nema®

Phorid and Sciarid Flies

Phorid larvae (*Megaselia halterata*) are obligate mycelial feeders therefore the adult flies are not attracted to oviposit in the compost until after spawning. The larvae are white, 1 to 6 mm long, are stubby at one end and have a pointed head at the other. They feed on the growing mushroom mycelium but rarely feed on the fruiting body itself. They can be distinguished from sciarid larvae by the absence of the black head and they develop more rapidly into a pupa.

The adult fly is 2 to 3 mm long, has very short antennae and a characteristic hump-back. It can be distinguished from the sciarid fly by the short antennae and by its rapid, jerky, running movement.



Adult phorids act as a vector for *Verticillium fungicola*. 75 flies per m² may already cause an outbreak of the disease. They are unable to fly when the temperature falls below 12°C and are therefore unlikely to re-infest mushroom houses between late autumn and early summer.

Sciarids (*Lycoriella ingenua*) are compost feeders and prefer unspawned compost to that colonised by *Agaricus* mycelium. The adult flies are attracted by volatiles from the compost so they may infest at any time after pasteurisation when the compost is cool. The adults are 3 - 4 mm long and can be distinguished from the other fly pests of mushrooms by their long antennae.



The females deposit between 50 to 200 eggs in the compost and the developing larvae pass through four moults varying in size from 1 to 8 mm long before pupating. They are easily recognised by their black shiny heads. They feed on rotting vegetation, so mushroom compost is an ideal substrate for them.

Sciarid larvae are more harmful to mushroom growing than the phorid larvae, as they are bigger and the larval stage lasts longer.

Life cycle (in days) at 18-20°C of phorid and sciarid flies

	Phorids	Sciarids	
Egg	2	3	not susceptible
Larva	9	14	Susceptible
Pupa	14	4	not susceptible
Total	25	21	