

## 1. Product identification

Product use: Bioinsecticide  
MSDS number: NZBWI-701  
Effective date: August 1, 2011

## Met52<sup>®</sup> EC Bioinsecticide

### 2. Composition:

Component	CAS number	% (w/w)
<i>Metarhizium anisopliae</i> Strain F52*	Not available	11.00
Other ingredients**		89.00

\*Contains  $1.0 \times 10^{10}$  Colony Forming Units (CFU) per milliliter.

\*\*Contains petroleum distillates

**Note:** This product contains beneficial microorganisms. Novozymes exclusively uses non-pathogenic beneficial microorganisms that are considered to be non-allergenic, non-irritating and non-sensitizing when used as directed. Exposure to very high levels of airborne microbial spores may result in very rare respiratory impairments or cause an allergic reaction in sensitized individuals. A Material Safety Data Sheet is supplied with all products.

### Emergency overview:

Individuals allergic to molds and/or fungi should avoid using this product. If use by allergic individuals is unavoidable, absorption by eye or skin contact, inhalation, or ingestion must be prevented to minimize the chance of allergic reaction.

### 3. Hazard identification:

**NFPA:** Health – 1, Flammability – 0, Reactivity – 0

#### Potential health effects:

**Eyes:** Causes moderate eye irritation.

**Skin contact:** May cause mild skin irritation.

**Skin absorption:** May be harmful if absorbed through skin. Do not expose open cuts or wounds to this product.

**Ingestion:** Avoid swallowing. Contains petroleum distillates. While ingesting, product may enter lungs and cause aspiration pneumonia.

**Inhalation:** May be harmful if inhaled.

**Chronic effects:** Not a likely hazard

**Cancer:** Not a likely hazard

**Birth defects:** Not available

**Reproductive effects:** Not available

**Mutagenic effects:** Not available

### 4. First aid measures:

**Note to physician:** Contains petroleum distillates.

*Vomiting may cause aspiration pneumonia.*

**Eyes:** Hold open eye and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**Skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Ingestion:** Do not induce vomiting. Do not administer liquids. Call a poison control center or doctor immediately for treatment advice.

**Inhalation:** Move person to fresh air. If person is not breathing call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

### 5. Fire-fighting measures:

**Flash point:** Not applicable

**Explosive limits:** Not applicable

**Auto-ignition temperature:** Not applicable

**Extinguishing media:** Use extinguishing media appropriate for controlling the surrounding fire.

**Sensitivity to mechanical impact/static discharge:** Not available

**Unusual fire and explosion hazards:** None known.

**Fire-fighting equipment:** Wear positive-pressure self-contained breathing apparatus and full turn-out gear.

### 6. Accidental release measures:

Contain the spill with any available absorbent medium and store in a suitable container until proper disposal can be arranged. Clean area with soap and water.

### 7. Handling and storage:

Do not contaminate water, food or feed by storage or disposal.

Store any unused product in its original container below 73 °F (23 °C) in a dry, locked place out of reach of children and out of direct sunlight. Do not use or store near heat or open flame. Use product within one year and by the expiry date noted on the label. Practice reasonable caution to avoid contact with this product. Avoid breathing dusts and mists if generated. Users should wash thoroughly after using this product.

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## In Case of Emergency Call: 1-888-744-5662

Available 24 hours a day 7 days a week from April 1<sup>st</sup> to June 15<sup>th</sup>,  
otherwise available from 8:00am to 4:30pm CST, Monday to Friday.

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## 8. Exposure controls, personal protection and exposure limits:

**Metarhizium anisopliae:** Not available

**Engineering controls:** Good ventilation is required. Avoid generating aerosols during handling.

**Breathing:** Users must wear an approved dust-mist filtering respirator/mask (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator/mask with any N-95, R-95, P-95 or HE filter.

**Protective clothing:** All handlers must wear long sleeved shirt and long pants, waterproof gloves, shoes, socks, eye goggles and a dust-mist filtering respirator/mask.

**Eyes:** Wear goggles, glassed with side shields or a face shield when handling this product.

**Other protection:** Users should wash hands before breaks and immediately after using this product.

## 9. Physical and chemical properties:

**Boiling point:** Not applicable

**Vapour pressure:** Not applicable

**Volatility:** Not applicable

**Appearance:** Dark, green liquid

**Odour:** Ester

**Solubility in water:** Not available

**Freezing point:** 0 °C (32 °F)

**Physical state:** Liquid

**Bulk density:** Not available

**Specific gravity:** 0.89

**pH:** 6.16 at 25 °C

## 10. Stability and reactivity:

**Stability:** Stable

**Incompatibility:** Acids, bases, oxidizers, reducers, disinfectants, fungicides, and/or biocides may inactivate.

**Hazardous decomposition products:** Thermal decomposition releases CO, CO<sub>2</sub>, hydrocarbons.

**Hazardous polymerization:** Does not occur

## 11. Toxicological information:

**Acute oral toxicity:** not available

**Acute dermal toxicity:** LD50 (rat) > 5000mg/kg.

**Acute inhalation toxicity:** not available

**Skin sensitization:** May cause allergic reactions.

**Carcinogenicity:** Not listed as a carcinogen by PMRA, EPA, OSHA

## 12. Ecological information:

**Toxicity to bees:** No signs of toxicity or pathogenicity

**Toxicity to fish:** Not available

**Toxicity to birds:** No signs of toxicity or pathogenicity

This product contains an ingredient that is toxic to fish. This product is approved for residential (urban and suburban) outdoor terrestrial non-food and agricultural food uses. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

## 13. Disposal considerations:

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Dispose of in accordance with local regulations.

## 14. Transportation information:

Material should be properly labeled for transport. This item is not regulated as a hazardous material for all modes of transportation within the U.S. and Canada.

## 15. Regulatory information:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

**FIFRA:** This product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and its Amendments.

**Master reference:** On file

**MSDS status:** New MSDS

## 16. Other information:

**Prepared by:** S. Heinz

This information may not be adequate for every application and therefore it is up to the user to determine the suitability of this information based on conditions of use, storage or local regulations.

**Notice:** The information contained in this Material Safety Data Sheet is presented in good faith and is believed to be accurate as of the effective date shown above. However, no other warranty, expressed, or implied, is given. Laws, regulations, and/or third party rights may prevent customers from importing, using, processing and/or reselling the products described herein in a given manner. Without separate written agreement between the customer and Novozymes to such effect this document does not constitute a representation or warranty of any kind and is subject to change without further notice.

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