

NEMGUARD[®] SC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

NEMGUARD

Distributed by:
 Bioline AgroSciences Africa Ltd.
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Manufactured by:
 ECOspray Ltd,
 Grange Farm,
 Cockley Cley Road Hilborough,
 Thetford Norfolk, IP26 5BT,
 United Kingdom

2. COMPOSITION/INFORMATION OF INGREDIENTS

Preparation contains:

Chemical Name	Concentration	CAS-No.	EC-No.	Classification
Garlic Extract	99.9%	8008-99-9 8000-78-0	232-371-1	Skin Sens. (Cat. 1B) H317

3. HAZARDS IDENTIFICATION

- › May cause an allergic skin reaction.
- › To avoid risks to human health and the environment, comply with the instructions for use

4. FIRST AID MEASURES

General Advice: Call a doctor in case of emergency. Do not use if under medical advice not to work with such compounds.

Notes to Doctor: This product is based on garlic juice concentrate and contains organo-sulfur compounds.

- › In case of inhalation, move to fresh air. If affected call doctor.
- › In case of skin contact wash off with soap and plenty of water. Get medical attention if irritation develops and persists.
- › In case of eye contact, rinse thoroughly with water. Remove contact lens and rinse eyes immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.
- › In case of ingestion DO NOT induce vomiting unless directed to do so by a physician or poison control centre. Rinse out mouth and give water in small sips to drink. Keep patient warm and at rest.

5. FIRE FIGHTING MEASURES

- › Suitable: Use water spray, dry chemical or carbon dioxide (CO₂ Foam).
- › Unsuitable: High volume water jet (contamination risk)
- › Special hazard: Dangerous gases can/are evolved in the event of fire
- › Wear protective clothing, eye protection and self-contained respiratory equipment.
- › Further information: Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

Precautions for safe handling

- › Personal precautions: Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.
- › Environmental precautions: Do not allow to get into surface water, drains and ground water. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or water course inform the water.

Methods and materials for containment and cleaning up

- › Methods for cleaning up: Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean floors and contaminated objects with plenty of water.
- › Additional advice: Check also for any local site procedures

7. HANDLING AND STORAGE

Methods and materials for containment and cleaning up

- › Advice on safe handling: No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Avoid dust formation. Ensure adequate ventilation
- › Advice on protection against fire and explosion: No special precautions required.
- › Hygiene measures: When using, do not eat, drink or smoke. Wash hands immediately after work, if necessary take a shower

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Conditions for safe storage, including any incompatibilities

- › Requirements for storage areas and containers: Store in original container and out of the reach of children, preferably in a locked storage area. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight.
- › Advice on common storage: Keep away from food, drink and animal feeding stuffs.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Conditions for safe storage, including any incompatibilities

- › Engineering measures: Ensure adequate ventilation, especially in confined areas
- › Respiratory protection: Wear respirator with a vapour filter mask (class 2) conforming to European norm EN140 and EN14387 or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
- › Hand protection: Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0.4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
- › Eye protection: Wear goggles (conforming to EN166, Field of Use= 5 or equivalent).
- › Skin and body protection: Wear standard coveralls and Category 3 Type 5 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Dark Brown viscous liquid
Odour	Garlic
Odour threshold	Strong
pH	5.5- 5.9 (CIPAC MT 75.3)
Melting point/Freezing point	Not applicable
Initial boiling point and boiling range	103°C
Flash point	Non-flammable (EEC A9)
Evaporation rate	Not applicable
Flammability (Solid, gas)	Non-flammable (EEC A10)
Upper/lower flammability or explosive limits	Non-flammable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	1.28 (EEC A3)
Solubility(ies)	Soluble in water
Partition coefficient: n-octanol/water	-1.49 (20°C)
Auto-ignition temperature	Does not ignite
Decomposition temperature	Not available
Viscosity	637-778 mPa.s (OECD 114)
Explosive properties	Not explosive
Oxidising properties	Does not ignite

10. STABILITY AND REACTIVITY

- › Reactivity: Stable under normal conditions.
- › Chemical stability: Stable under recommended storage conditions.
- › Possibility of hazardous reactions: No hazardous reactions when stored and handled according to prescribed instructions.
- › Conditions to avoid: Extremes of temperature and direct sunlight.
- › Incompatible materials: Store only in the original container.
- › Hazardous decomposition products: No decomposition products expected under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Information given is based on data for the formulation (unless otherwise specified).

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Acute oral toxicity	Not classified
Acute inhalation toxicity	Not classified
Acute dermal toxicity	Not classified
Skin corrosion/ Irritation	No skin irritation (Rabbit)
Eye irritation	No eye irritation (Rabbit)
Sensitisation	Mild sensitising (Mice)
Repeated dose toxicity	Not classified
Mutagenicity assessment	Garlic extract is not considered mutagenic
Carcinogenicity assessment	Garlic extract is not considered carcinogenic
Toxicity to reproductive assessment	Garlic extract is not considered a reproductive toxicant at non-maternally toxic dose level
Developmental toxicity assessment	Garlic extract is not considered a developmental toxicant
STOT- single exposure	Garlic extract is not considered as toxic to specific organs
STOT-repeated exposure	Garlic extract is not considered as toxic to specific organs
Further information	The above values are calculated in accordance with Regulation (EC) 1272/2008

Information given is based on data for the formulation (unless otherwise specified). For human effects refer to section 4 on the toxic effects of the formulation.

12. ECOLOGICAL INFORMATION

- › Toxicity to fish: EC50 (Carp) 19.64mg/l, Exposure time: 96 h
- › Toxicity to aquatic invertebrates: EC50 (Daphnia) 9.3mg/l Exposure time: 48 h
- › Toxicity to aquatic plants: ErC50 (Algae) 57.8mg/l, Exposure time: 72 h
- › Persistence and degradability: Not persistent and degradable quickly due to short half life
- › Bio-accumulative potential: Does not bio-accumulate
- › Mobility in soil: No data available
- › Results of PBT and vPvB assessment: This substance is not considered to be persistent, bio accumulative and toxic (PBT). This substance is not considered to be very persistent and very bio accumulative (vPvB).
- › Other adverse effects: No other effects to be mentioned.

13. DISPOSAL CONSIDERATION

Waste treatment methods

- › Product: Do not empty into drains. Dispose of unused product according to national regulation.
- › Contaminated packaging: Do not re-use empty containers.

14. TRANSPORT INFORMATION

Not dangerous cargo, keep under dry and cool conditions during transit.

15. REGULATORY INFORMATION

Product label conforms to PCPB Kenya (CAP 346) requirements.

16. OTHER INFORMATION

Product is supplied in 1 litre packaging. Packaging is plastic bottle.

DISCLAIMER

The information contained in this MSDS (or Material Safety Data Sheet) is believed to be accurate and reliable as of the date of issue, but no representation, guarantee, or warranty, express or implied, or made to the accuracy, reliability, or completeness of the information. It is provided for the purpose of complying with hazard communication regulations. It is not intended to constitute performance information concerning the product. It is the user's responsibility to determine the suitability for use of the product described herein. Dudutech does not assume legal responsibility for reliance upon the information contained herein.