

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Product name: **Garlic** (Allium sativum)

Manufacturer/supplier identification

Company: Calmer Solutions Limited®
Hadresham
Woolborough Lane
Outwood
Surrey
RH1 5QR.
Telephone: +44 (0)1342 844658
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Emergency Telephone No: Please contact your local NHS 111

2. Composition/information on main ingredients

Main ingredients: The Essential Oil of Garlic

CAS No USA: 8000-78-0
RTECS: LX3145800
EINECS:
TSCA:
Concentration: 100%

3. Hazards identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects: CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

4. *First aid measures*

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact: After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion: Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

5. *Fire fighting measures*

Flammability of the Product: Flammable.

Auto-Ignition Temperature: Not available.

Flash Points: CLOSED CUP: 46°C (114.8°F).

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Flammable liquid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available. cooled with water spray.

6. ***Accidental release measures***

Personal precautions: Avoid inhalation & direct contact with skin & eyes. Use individual protective equipment (safety glasses, waterproof-boots, suitable protective clothing) in case of major spillages.

Environment precautions: Keep away from drains, soils, surface & ground waters.

- Cleaning up methods
- Remove all potential ignition sources.
- Contain spilled material

Cover for spillages: with an inert or non-combustible inorganic absorbent material, sweep up and remove to an approved disposal container. Observe relevant local and national rules and regulations

7. ***Handling and storage***

Precautions in handling: Apply good manufacturing practice & industrial hygiene practices, ensuring proper ventilation. Observe good personal hygiene, and do not eat, drink or smoke whilst handling.

Storage conditions: Store in tightly closed original container, in a cool, dry & ventilated area away from heat sources & protected from light. Keep air contact to a minimum.

Fire protection: Keep away from ignition sources & naked flames. Take precautions to avoid static discharges in working area.

8. ***Exposure controls/personal protection***

Respiratory protection: Avoid breathing product vapour. Apply local ventilation where possible.

Ventilation: Ensure good ventilation of working area.

Hand protection: Avoid all skin contact. Use chemically resistant gloves if required.

Eye protection: Use safety glasses.

Work/Hygiene practices: Wash hands with soap & water after handling.

9. ***Physical and chemical properties***

Physical state and appearance: Liquid.

Odor: Garlic. (Strong.)

Taste: Not available.

Molecular Weight: Not available.

Color: Yellow to red.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 1.065 (Water = 1)

Vapor Pressure: Not available.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: **Not available.**

10. Stability and reactivity

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

11. Toxicological information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 850 mg/kg [Mouse].

Chronic Effects on Humans: Not available

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: *Not available.*

12. Ecological information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

13. Disposal considerations

Product disposal: Dispose of in accordance with all applicable local and national regulations.

Container disposal: Labels should not be removed from containers until they have been cleaned. Contaminated containers should not be treated as household waste. Containers should be cleaned using appropriate methods and then re-used (re-cycled) or disposed of by landfill or incineration as appropriate.

14. Transport information

DOT Classification: CLASS 3: Combustible liquid with a flash point greater than 37.8C (100F).

Identification: : Flammable liquids n.o.s. : UN1993 PG: Not available.

Special Provisions for Transport: Not available.

15. Regulatory information

Federal and State Regulations: TSCA 8(b) inventory: Garlic oil

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

DSCL (EEC): R10- Flammable. R22- Harmful if swallowed. R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

16. Other information

The information and recommendations contained in this data sheet are believed to be accurate and represent the best information currently available to us. No warranty, guarantee or representation is made by Calmer Solutions Limited[®] as to the correctness or sufficiency of the information and recommendations in this data sheet, nor can it be assumed that all possible safety measures are contained in this data sheet or that additional measures may not be required under varying conditions and circumstances.

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Please ensure that this Safety Data Sheet is passed to the appropriate person(s) in your company, who is (are) capable of acting on the information.