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MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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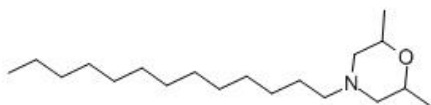
1. Chemical Product Identification

Product Name: Tridemorph

Molecular Formula: $C_{19}H_{39}NO$

Molecular Weight: 297.52g/mol

Structural Formula:



Chemical Name: 2,6-dimethyl-4-tridecylmorpholine

Form: Liquid

Color: Yellow

Odor: Amine like

CAS No.: 81412-43-3

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Tridemorph	81412-43-3	98.0
Other ingredients	--	2.0

3. Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Reproductive toxicity (Category 1B)



Acute toxicity, Inhalation (Category 4)

Acute toxicity, Oral (Category 4)

Skin irritation (Category 2)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

May cause harm to the unborn child. Harmful by inhalation and if swallowed. Irritating to skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word Danger

Hazard statement(s)

H315 Causes skin irritation.

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H410 Very toxic to aquatic life with long lasting effects.

H360D May damage the unborn child.

Precautionary statement(s)

P201 Obtain special instructions before use.

P273 Avoid release to the environment.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard none

Statements

Other hazards - none

4. First Aid Measures

Inhalation: Remove victim to fresh air. Keep victim warm and at rest. If breathing is difficult: give oxygen. If not breathing: apply artificial respiration.

Get medical attention.

Ingestion: Induce vomiting. Never give anything by mouth to an unconscious person. Wash



out mouth with water. Consult a doctor.

Skin contact: Remove contaminated clothing. Wash off with plenty of water and soap.

Consult a doctor in the event of any complaints.

Eye contact: Wash off with plenty of water for at least 15 minutes. If pain persists, consult an eye specialist.

Notes to a physician: There is no specific antidote. Treat symptomatically and give supportive therapy. If ingested perform gastric lavage and administer activated charcoal.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO_x)

Carbon oxides, nitrogen oxides (NO_x)

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary

Further information

no data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.



7. Handling And Storage

HANDLING: Use only with adequate ventilation and appropriate protective equipment. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Keep out of reach of children and animals. Store in a cool, dry place and avoid excess heat. Store in original containers only. Carefully open containers. After partial use, fold and roll back bags, clamp and close tightly. Do not contaminate water, food or feed by storage and disposal.

8. Exposure Controls/Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Hygiene measures: Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day. Respiratory system: Wear appropriate respirator when ventilation is inadequate.

Skin and body: Lab coat.

Hands: Gloves

Eyes: Safety glasses.

9. Physical and Chemical Properties

Appearance: Off-white powder

Odor: odorous egg smell

Boiling Point: 134°C at 66.7Pa

Solubility in water: 1.1mg/L (pH7; 20°C)

Vapor Pressure: 12mPa at 20°C

Relative density: 0.86

Partition coefficient : K_{ow} logP=4.20 (pH7; 22 °C)

PH: 6-8

Flash point : 142°C



10. Stability and Reactivity

Stability: Stable under normal dry conditions.

Conditions to avoid : Avoid exposure to excessive heat

Materials to avoid: Strong oxidizing agents Strong oxidizing agents

Hazardous reactions:

Hazardous decomposition products: Decomposed by excessive heat and acids. Thermal decomposition will generate oxides of carbon, oxides of nitrogen, and sulfur. Acid decomposition may evolve carbon disulfide.

Hazardous polymerization: will not occur.

11. Toxicological Information

Acute oral LD50 for rats is 500 mg/kg.

Acute dermal LD50 for rats is >4000 mg/kg.

Acute inhalation toxicity LC50 (4h) for rats is 4.5 mg/L.

Skin irritation: Non-irritating to skin (rabbits).

Eye irritation: Non-irritating to eyes (rabbits).

Skin sensitization for guinea pig: Sensitizing.

12. Ecological And Ecotoxicological Information

Effect on birds: Acute oral LD50 for quail is 1388 mg/kg.

Effect on fish: Acute LC50 (96 h) for Rainbow trout is 3.4 mg/l.

Effects on aquatic invertebrates: Acute EC50 (48 h) for Daphnia magna is 1.3 mg/l.

Effects on algae: Acute 72 hour EC50 is 0.28 mg/l.

Effects on bees: acute 48 hour LD50 is 200 µg/bee.

Effects on earthworms: Acute 14 day LC50 is 880 mg/kg.

13. Disposal Considerations

Do not reuse containers for any purpose. Completely empty bag into application equipment. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: make the empty container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food, or



feed by storage or disposal.

14. Transport Information

Not Applicable

15. Regulatory Information

Not applicable

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.