

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Chemical Name Spiroxamine-d4

Catalogue # S683502

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Uses To be used only for scientific research and development. Not for use in humans or animals.

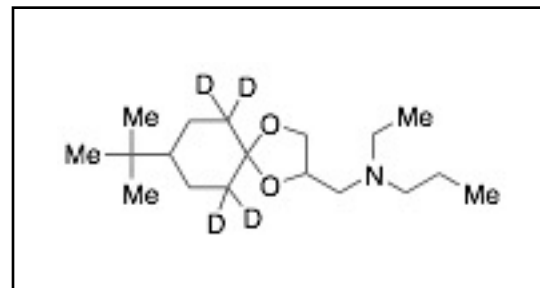
1.3 Details of the Supplier of the Safety Data Sheet

Company Toronto Research Chemicals
2 Brisbane Road
Toronto, ON M3J 2J8
CANADA

Telephone +14166659696

FAX +14166654439

Email orders@trc-canada.com



1.4 Emergency Telephone Number

Emergency# +1(416) 665-9696 between 0800-1700 (GMT-5)

2. HAZARDS IDENTIFICATION

WHMIS Classification (Canada)

D2B Toxic Material Causing Other Toxic Effects
Moderate Skin irritant

Skin Sensitizer

WHMIS Symbols (Canada)



2.1/2.2 Classification of the Substance or Mixture and Label Elements

GHS Hazards Classification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)

Acute Toxicity, Oral (Category 4)

Acute Toxicity, Inhalation (Category 4)

Acute Toxicity, Dermal (Category 4)

Skin Irritation (Category 2)

Sensitisation, Skin (Category 1)

Hazardous to the Aquatic Environment, Acute Hazard (Category 1)

Hazardous to the Aquatic Environment, Long-Term Hazard (Category 1)

GHS Hazards Identification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)

Signal Word Warning

GHS Hazard Statements

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H312 Harmful in contact with skin.



Personal precautions

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

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Method 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.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.
Keep in a dry place.

Storage conditions: Refrigerator, under inert atmosphere

7.3 Specific End Uses

For scientific research and development only. Not for use in humans or animals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Contains no components with established occupational exposure limits.

8.2 Exposure Controls

Appropriate Engineering Controls

A laboratory fumehood or other appropriate form of local exhaust ventilation should be used to avoid exposure.

Personal Protective Equipment

All recommendations below are advisory in nature and a risk assessment should be performed by the employer/end user prior to use of this product. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

Eye/Face Protection

Safety goggles or face shield. All equipment should have been tested and approved under appropriate standards, such as NIOSH (US), CSA (Canada), or EN 166 (EU).

Skin Protection

Gloves should be used when handling this material. Gloves are to be inspected prior to use. Contaminated gloves are to be removed using proper glove removal technique so that the outer surface of the glove does not contact bare skin. Dispose of contaminated gloves after use in compliance with good laboratory practices and local requirements.

Gloves used for incidental exposures (splash protection) should be designated as "chemical resistant" by EU standard EN 374 with the resistance codes corresponding to the anticipated use of the material. Unrated gloves are not recommended.

Suggested gloves: AnsellPro Sol-Vex nitrile gloves style 37-175, 15 mil thickness.

Penetration time has not been determined.

Gloves used for prolonged direct exposure (immersion) should be designated "chemical resistant" as per EN 734 with the resistance codes corresponding to the anticipated use of the material.

Suggested gloves: AnsellPro Viton/Butyl gloves style 38-612, 4/8 mil thickness.

Penetration time has not been determined.

These recommendations may not apply if the material is mixed with any other chemical, or dissolved into a solution. A risk assessment must be performed to ensure the gloves will still offer acceptable protection.

Body Protection

Fire resistant (Nomex) lab coat or coveralls.

Respiratory Protection

Recommended respirators are NIOSH-approved N100 or CEN-approved FFP3 particulate respirators. These are to be only used as a backup to local exhaust ventilation or other engineering controls. If the respirator is the only means of protection, a full-face supplied air respirator must be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

A) Appearance

Off-White Thick Oil

C) Odour Threshold

No data available

E) Melting Point/Freezing Point

N/A

G) Flash point

No data available

I) Flammability (Solid/Gas)

No data available

K) Vapour Pressure

No data available

M) Relative Density

No data available

O) Partition Coefficient: n-octanol/water

No data available

Q) Decomposition Temperature

No data available

S) Explosive Properties

No data available

B) Odour

No data available

D) pH

No data available

F) Initial Boiling Point/Boiling Range

No data available

H) Evaporation Rate

No data available

J) Upper/Lower Flammability/Explosive Limits

No data available

L) Vapour Density

No data available

N) Solubility

Chloroform (Slightly), Methanol (Slightly)

P) Auto-Ignition Temperature

No data available

R) Viscosity

No data available

T) Oxidizing Properties

No data available

9.2 Other Information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical Stability

Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions

No data available.

10.4 Conditions to Avoid

No data available.

10.5 Incompatible Materials

Strong oxidizing agents.

10.6 Hazardous Decomposition Products

In the event of fire: See section 5. Other decomposition products: No data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

A) Acute Toxicity

Oral LD50: No data available.

Inhalation LC50: No data available.

Dermal LD50: No data available.

B) Skin Corrosion/Irritation

Moderate skin irritant.

C) Serious Eye Damage/Irritation

No data available

D) Respiratory or Skin Sensitization

May cause an allergic skin reaction.

E) Germ Cell Mutagenicity

No data available

F) Carcinogenicity

No data available

G) Reproductive Toxicity/Teratogenicity

No data available

H) Single Target Organ Toxicity - Single Exposure

No data available

I) Single Target Organ Toxicity - Repeated Exposure

No data available

J) Aspiration Hazard

No data available

K) Potential Health Effects and Routes of Exposure

Inhalation

Harmful if inhaled. May cause respiratory tract irritation.

Ingestion

Harmful if swallowed.

Skin

Harmful if absorbed through skin. May cause skin irritation.

Eyes

May cause eye irritation.

L) Signs and Symptoms of Exposure

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or section 11.

To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated.

M) Additional Information

RTECS: JH2940000

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish:

LC50 - Oncorhynchus mykiss (rainbow trout) - 18.5 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - 6.1 mg/l - 48 h

Toxicity to algae:

EC50 - Desmodesmus subspicatus (green algae) - 0.02 mg/l - 72 h

12.2 Persistence and Degradability

No data available.

12.3 Bioaccumulative Potential

No data available.

12.4 Mobility in Soil

No data available.

12.5 Results of PBT and vPvB Assessment

No data available.

12.6 Other Adverse Effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

A) Product

Product may be burned in an incinerator equipped with afterburner and scrubber. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed.

B) Contaminated Packaging

Dispose of as above.

C) Other Considerations

Product is not to be disposed of in sanitary sewers, storm sewers, or landfills.

14. TRANSPORT INFORMATION

14.1 UN Number

DOT (US): N/A IATA: UN3082 IMDG: UN3082 ADR/RID: N/A

14.2 UN Proper Shipping Name

DOT (US)/IATA:

Not dangerous goods / Environmentally hazardous substance, liquid, n.o.s. (Spiroxamine-d4)

IMDG/ARD/RID:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Spiroxamine-d4) / Not dangerous goods

14.3 Transport Hazard Class(es)

DOT (US): N/A IATA: 9 IMDG: 9 ADR/RID: N/A

14.4 Packing Group

DOT (US): N/A IATA: III IMDG: III ADR/RID: N/A

14.5 Environmental Hazards

DOT (US): None IATA: None IMDG: Marine pollutant ADR/RID: None

14.6 Special Precautions for User

None

15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of WHMIS (Canada), OSHA 1910.1200 (US), and EU Regulation EC No. 1907/2006 (European Union).

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

A) Canada

DSL/NDSL Status: This product is not listed on the Canadian DSL/NDSL.

B) United States

TSCA Status: This product is not listed on the US EPA TSCA.

C) European Union

ECHA Status: This product is not registered with the EU ECHA.

15.2 Chemical Safety Assessment

No data available

16. OTHER INFORMATION

16.1 Revision History

Original Publication Date: 2/4/2019

16.2 List of Abbreviations

| | |
|-------|---|
| LD50 | Median lethal dose of a substance required to kill 50% of a test population. |
| LC50 | Medial lethal concentration of a substance required to kill 50% of a test population. |
| LDLo | Lowest known lethal dose |
| TDLo | Lowest known toxic dose |
| IARC | International Agency for Research on Cancer |
| NTP | National Toxicology Program |
| RTECS | Registry of Toxic Effects of Chemical Substances |

16.3 Further Information

Copyright 2015. Toronto Research Chemicals Inc. Copies may be made for internal use only. The above information is believed to be correct to the best of our knowledge, but is to be only used as a guide. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Please take all due care when handling this product.