

Material Safety Data Sheet

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Version 1.2

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name (-)-NICOTINE HYDROGEN TARTRATE
Product Number N5260

Company Sigma-Aldrich Pty. Ltd.
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
(-)-NICOTINE DITARTRATE	65-31-6	200-607-2	614-002-00-X

Formula C₁₀H₁₄N₂.2C₄H₆O₆
Molecular Weight 462.4 AMU

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Very toxic by inhalation, in contact with skin and if swallowed.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance

Physical State: Solid

Property

Value

At Temperature or Pressure

pH

N/A

BP/BP Range

N/A

MP/MP Range

N/A

Flash Point

N/A

Flammability

N/A

Autoignition Temp

N/A

Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and nitrogen oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: QT0350000

ACUTE TOXICITY

LD50
Oral
Rat
65 mg/kg

LD50
Intraperitoneal
Rat
83 MG/KG

LD50
Intravenous
Rat
600 MG/KG
Remarks: Behavioral:Convulsions or effect on seizure threshold.

LD50
Parenteral
Rat
33500 UG/KG

LD50
Oral
Mouse

65 mg/kg

LD50
Intraperitoneal
Mouse
9100 UG/KG

LD50
Subcutaneous
Mouse
53 MG/KG

LD50
Intravenous
Mouse
300 UG/KG
Remarks: Behavioral:Rigidity (includes catalepsy).
Behavioral:Convulsions or effect on seizure threshold.

LD50
Intraperitoneal
Hamster
125 MG/KG

LD50
Parenteral
Frog
337 MG/KG

SIGNS AND SYMPTOMS OF EXPOSURE

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be fatal if absorbed through skin.
Eye Contact: May cause eye irritation.
Inhalation: May be fatal if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be fatal if swallowed.

TARGET ORGAN INFORMATION

Central nervous system.

CHRONIC EXPOSURE - TERATOGEN

Result: Possible risk of congenital malformation in the fetus.

Species: Rat
Dose: 85503 UG/KG
Route of Application: Implant
Exposure Time: (4-18D PREG)
Result: Specific Developmental Abnormalities: Central nervous system.

Species: Rat
Dose: 126 MG/KG
Route of Application: Implant
Exposure Time: (1-21D PREG)
Result: Specific Developmental Abnormalities: Central nervous system.

Species: Rat
Dose: 34 MG/KG
Route of Application: Implant
Exposure Time: (4-20D PREG)
Result: Specific Developmental Abnormalities: Central nervous system.

Species: Mouse
Dose: 15391 UG/KG
Route of Application: Subcutaneous
Exposure Time: (1-6D PREG)
Result: Specific Developmental Abnormalities: Eye, ear.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Result: May cause reproductive disorders.

Species: Rat
Dose: 9500 UG/KG
Route of Application: Intraperitoneal
Exposure Time: (3-21D PREG)
Result: Effects on Newborn: Behavioral.

Species: Rat
Dose: 285 UG/KG
Route of Application: Subcutaneous
Exposure Time: (1D MALE)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).

Species: Rat
Dose: 75 MG/KG
Route of Application: Subcutaneous
Exposure Time: (1-5D PREG)
Result: Effects on Fertility: Other measures of fertility

Species: Rat
Dose: 90 MG/KG
Route of Application: Subcutaneous
Exposure Time: (1-21D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Newborn: Sex ratio. Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Species: Rat
Dose: 102 MG/KG
Route of Application: Subcutaneous
Exposure Time: (4-20D PREG)
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Biochemical and metabolic.

Species: Rat
Dose: 712 UG/KG
Route of Application: Implant
Exposure Time: (12D PREG)
Result: Effects on Newborn: Biochemical and metabolic.

Species: Rat
Dose: 42 MG/KG
Route of Application: Implant
Exposure Time: (12-18D PREG)

Result: Effects on Newborn: Biochemical and metabolic. Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Species: Rat

Dose: 102 MG/KG

Route of Application: Implant

Exposure Time: (4-20D PREG)

Result: Maternal Effects: Other effects. Effects on Newborn: Biochemical and metabolic.

Species: Monkey

Dose: 50 UG/KG

Route of Application: Intravenous

Exposure Time: (1D PRE)

Result: Maternal Effects: Ovaries, fallopian tubes.

Species: Guinea pig

Dose: 68 MG/KG

Route of Application: Subcutaneous

Exposure Time: (1-68D PREG)

Result: Effects on Newborn: Behavioral.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 1659

Class: 6.1

PG: II

Proper Shipping Name: Nicotine tartrate

IMDG

UN#: 1659

Class: 6.1

PG: II

Proper Shipping Name: Nicotine tartrate

Marine Pollutant: No

Severe Marine Pollutant: No

IATA

UN#: 1659

Class: 6.1

PG: II

Proper Shipping Name: Nicotine tartrate

Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 614-002-00-X

NOTA: A

INDICATION OF DANGER: T+-N

Very toxic. Dangerous for the environment.

R-PHRASES: 26/27/28-51/53

Very toxic by inhalation, in contact with skin and if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-PHRASES: 13-28-45-61

Keep away from food, drink, and animal feedingstuffs. After contact with skin, wash immediately with plenty of soap-suds. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/safety data sheets.

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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