Material Safety Data Sheet

Version 4.4 Revision Date 10/25/2012 Print Date 03/19/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : (-)-Nicotine hydrogen tartrate salt

Product Number : N5260 Brand : Sigma

Supplier : Sigma-Aldrich

3050 Spruce Street SAINT LOUIS MO 63103

USA

Telephone : +1 800-325-5832 Fax : +1 800-325-5052 Emergency Phone # (For : (314) 776-6555

both supplier and

manufacturer)

Preparation Information : Sigma-Aldrich Corporation

Product Safety - Americas Region

1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption, Teratogen, Reproductive hazard

GHS Classification

Acute toxicity, Dermal (Category 1)
Acute toxicity, Oral (Category 2)
Acute toxicity, Inhalation (Category 2)
Acute aquatic toxicity (Category 2)
Chronic aquatic toxicity (Category 4)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H300 + H310 Fatal if swallowed or in contact with skin

H330 Fatal if inhaled. H401 Toxic to aquatic life.

H413 May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/ protective clothing.

P284 Wear respiratory protection.

P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.
P310 Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard: 4 Chronic Health Hazard: * Flammability: 0 Physical hazards: 0

NFPA Rating

Health hazard: 4
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

InhalationSkinMay be fatal if inhaled. May cause respiratory tract irritation.May be fatal if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation. **Ingestion** May be fatal if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : (-)-1-Methyl-2-(3-pyridyl)pyrrolidine

Formula : $C_{10}H_{14}N_2 \cdot 2C_4H_6O_6$

Molecular Weight : 462.41 g/mol

| Component | | Concentration |
|--------------------------------|--------------|---------------|
| Nicotine dihydrogen ditartrate | | |
| CAS-No. | 65-31-6 | - |
| EC-No. | 200-607-2 | |
| Index-No. | 614-002-00-X | |
| | | |

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

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

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

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

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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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form powder Colour white

Safety data

pH no data available

Melting no data available

point/freezing point

Boiling point no data available
Flash point no data available
Ignition temperature no data available
Autoignition no data available
temperature

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Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure no data available
Density no data available
Water solubility no data available
Partition coefficient: no data available

n-octanol/water

Relative vapour

density

no data available

Odour no data available
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

no data available

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx) Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - rat - 65 mg/kg

Inhalation LC50 Dermal LD50

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as

probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by ACGIH.

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NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a

known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

May cause reproductive disorders.

Teratogenicity

Possible risk of congenital malformation in the fetus.

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be fatal if inhaled. May cause respiratory tract irritation.

Ingestion May be fatal if swallowed.

Skin May be fatal if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure

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

Synergistic effects

no data available

Additional Information

RTECS: QT0350000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

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

Toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. 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.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1659 Class: 6.1 Packing group: II

Proper shipping name: Nicotine tartrate Reportable Quantity (RQ): 100 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 1659 Class: 6.1 Packing group: II EMS-No: F-A, S-A

Proper shipping name: NICOTINE TARTRATE

Marine pollutant: No

IATA

UN number: 1659 Class: 6.1 Packing group: II

Proper shipping name: Nicotine tartrate

15. REGULATORY INFORMATION

OSHA Hazards

Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption, Teratogen, Reproductive hazard

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III. Section 313:

CAS-No. Revision Date Nicotine dihydrogen ditartrate 65-31-6 2007-07-01

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

CAS-No. Revision Date Nicotine dihydrogen ditartrate 65-31-6 2007-07-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information

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