

MATERIAL SAFETY DATA SHEET

(NICOTINE)

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Nicotine
Company Identification : Nicotine Vault
Culver St, Somerville, NJ, 08876, USA
Contact No. : +1 (534) 444-6872
For further enquiries :Info@nicotinevault.com

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 2), H300

Acute toxicity, Dermal (Category 1), H310

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H300 + H310	Fatal if swallowed or in contact with skin.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P310	Immediately call a POISON CENTER/doctor.
P322	Specific measures (see supplemental first aid instructions on this label).
P361	Remove/Take off immediately all contaminated clothing.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage
P405	Store locked up
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	: L(-)-3-(N-Methyl)- α -pyrrolidyl)pyridin : (-)-1-Methyl-2-(3-pyridyl)pyrrolidine
Molecular weight	: 162.23 g/mol
CAS-No.	: 54-11-5

EC-No. : 200-193-3
Index-No. : 614-001-00-4

Hazardous components

Component	Classification	Concentration
(-)-Nicotine	Acute Tox. 3; Acute Tox. 1; Aquatic Acute 2; Aquatic Chronic 2; H301, H310, H411	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4 FIRST AID MEASURES

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x)

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

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

6.2 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.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. Hygroscopic. Air and light sensitive. Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
(-)-Nicotine	54-11-5	TWA	0.5 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Gastrointestinal damage Cardiac impairment Danger of cutaneous absorption		
		TWA	0.5 mg/m ³	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		TWA	0.5 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin designation		
		PEL	0.075 ppm 0.5 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face 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 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

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) 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).

Control of environmental exposure

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

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

(a) Appearance	Form: clear, liquid
(b) Odour	No data available
(c) Odour Threshold	No data available
(d) pH	10.2
(e) Melting point/freezing	Melting point/range: -79 °C (-110 °F)
(f) Initial boiling point and boiling range	247 °C (477 °F) at 993 hPa
(g) Flash point	101 °C (214 °F) - closed cup
(h) Evaporation rate	No data available
(i) Flammability (solid, gas)	No data available
(j) Upper/ lower flammability or explosive limits	No data available
(k) Vapour pressure	0.051 hPa at 25 °C (77 °F)
(l) Vapour density	5.6 - (Air = 1.0)
(m) Relative density	1.010 g/cm ³ at 20 °C (68 °F)
(n) Water solubility	completely miscible
(o) Partition coefficient: noctanol/water	log Pow: 1.17

	(p) Auto-ignition temperature	No data available
	(q) Decomposition temperature	No data available
	(r) Viscosity	No data available
	(s) Explosive properties	No data available
	(t) Oxidizing properties	No data available
9.2	Other safety information	
	Solubility in other solvents	Ethanol 50 g/l
	Relative vapour density	5.6 - (Air = 1.0)

SECTION 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

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) Other decomposition products - No data available In the event of fire: see section 5

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 70 mg/kg

(OECD Test Guideline 401)

LD50 Dermal - Rabbit - 50 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

slight irritation

Serious eye damage/eye irritation

Eyes - In vitro study

Result: negative

(OECD Test Guideline 437)

Respiratory or skin sensitization

Sensitisation test: - Mouse

Result: Does not cause skin sensitisation.

(OECD Test Guideline 429)

Germ cell mutagenicity

Ames test

Salmonella typhimurium

Result: negative

(National Toxicology Program)

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.

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 on OSHA's list of regulated carcinogens.

Reproductive toxicity**Specific target organ toxicity - single exposure**

Acute inhalation toxicity - Irritation symptoms in the respiratory tract.

Specific target organ toxicity - repeated exposure**Aspiration hazard****Additional Information**

RTECS: QS5250000

prolonged or repeated exposure can cause:, Vomiting, Diarrhoea, Convulsions, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption:

Nausea, Vomiting, Diarrhoea

Systemic effects:

Headache, Dizziness, cardiovascular disorders, CNS disorders, agitation, spasms, depressed respiration, collapse,

Coma

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence.

SECTION 12 ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish

LC50 - Oncorhynchus mykiss (rainbow trout) - 4 mg/l - 96 h((-Nicotine) Remarks: (ECOTOX Database).

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Daphnia pulex (Water flea) - 0.24 mg/l - 48 h((-Nicotine) (US-EPA)

12.2 Persistence and degradability

12.3 Bioaccumulative potential

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects

SECTION 13 DISPOSAL CONSIDERATIONS

Product

Contaminated packaging

14.1 DOT (US)

ALL INNER PACKAGINGS MUST BE IN METAL CANS / PLASTIC DRUM FOR FXG

IMDG

Marine pollutant : yes

IATA

ALL INNER PACKAGINGS MUST BE IN METAL CANS/ PLASTIC DRUM FOR FXG FOR FX AIR

SECTION 15 REGULATORY INFORMATION

15.1 SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

CAS-No.	Revision Date
54-11-5	2008-11-03

(-)-Nicotine

SARA 313 Components

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

CAS-No.	Revision Date
54-11-5	2008-11-03

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

CAS-No.	Revision Date
54-11-5	2008-11-03

(-)-Nicotine

Pennsylvania Right To Know Components

(-)-Nicotine

CAS-No.	Revision Date
54-11-5	2008-11-03

(-)-Nicotine

CAS-No.	Revision Date
54-11-5	2008-11-03

New Jersey Right To Know Components

(-)-Nicotine

CAS-No.	Revision Date
54-11-5	2008-11-03

California Prop. 65 Components

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

CAS-No.	Revision Date
54-11-5	2008-11-03

(-)-Nicotine

SECTION 16 ADDITIONAL INFORMATION

16.1 Full text of H-Statements referred to under sections 2 and 3.

H300	Fatal if swallowed.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

HMIS Rating

Health hazard: 4

Chronic Health Hazard: *

Flammability: 1

Physical Hazard 0

NFPA Rating

Health hazard: 4

Fire Hazard: 1

Reactivity Hazard: 0

Further information

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 and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.