Nicotine

Creation date: 3.01.2021

version 1.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifiers

Nicotine; 3-[(2S)-1-methylpyrrolidin-2-yl]pyridine
CAS No.: 54-11-5
Index-No.: 614-001-00-4
EC / List No.: 200-193-3
REACH No.: **01-2120066934-47-0007**
Molecular Formula: C10H14N2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Manufacture of substances and mixtures. Professional uses.
The solution is intended for the production of innovative tobacco products in accordance with Art. 2 clause 1 point 36 letter (a) of the act on excise duty tax, for shisha - tobacco for water pipes, snus, nicotine bags, nicotine gums.

1.3. Details of the supplier of the safety data sheet

QATS LAB S.R.L. Str. Doinei Nr.75-77, Ap.1
Fundeni, Dobroesti, Ilfov
ROMANIA
Telephone: +40 745857738
E-mail: contact@steamok.eu

1.4. Emergency telephone number

Emergency number: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Acute Tox. 2; H300: Fatal if swallowed.
Acute Tox. 2; H310: Fatal in contact with skin.
Acute Tox. 2; H330: Fatal if inhaled.
Aquatic Chronic 2; H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictograms

Signal word: Danger

Hazard statements

H300: Fatal if swallowed.
H310: Fatal in contact with skin.
H330: Fatal if inhaled.
H411: Toxic to aquatic life with long lasting effects.

Precautionary statements

P262: Do not get in eyes, on skin, or on clothing.
P270: Do not eat, drink or smoke when using this product.
P282: Wear cold insulating gloves/face shield/eye protection.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

This substance does not meet the PBT / vPvB criteria according Regulation (EC) No 1907/2006.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance	CAS No.	Index-No.	EC / List No.	**REACH No.:**
Nicotine;3-[(2S)-1-methylpyrrolidin-2-yl] pyridine	54-11-5	614-001-00-4	200-193-3	no available

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

General information: first aid person should take care of his own safety first.
Instantly remove any clothing soiled by the product. In case of irregular breathing or respiratory arrest provide CPR. Show this safety data sheet to the doctor in attendance.
After inhalation: In case of unconsciousness bring patient into stable side position for transport.
After skin contact: Instantly wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water. Then consult doctor.
After swallowing: Do not induce vomiting; instantly call for medical help.

4.2. Most important symptoms and effects, both acute and delayed

Dizziness and headache, agitation, vomiting, convulsions, collapse, respiratory arrest.

4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: foam, extinguishing powder, water spray, carbon dioxide

Extinguishing media which must not be used for safety reasons: water jet

5.2. Special hazards arising from the substance or mixture

In case of fire, carbon oxides may be formed: nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2).

5.3. Advice for firefighters

In case of fire, wear self-contained breathing apparatus pressure-demand, and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate workers to a safe place. Ensure adequate ventilation. Avoid inhaling vapor, mist, spray. Use complete suit protecting against chemicals. In case of the possibility of uncontrolled release, use breathing apparatus.

6.2. Environmental precautions

Avoid release to the environment, groundwater. Collect spillage if it safe. Should not be released into environment. Prevent from reaching into drains, sewer, or waterway.

6.3. Methods and material for containment and cleaning up

Wear personal protective equipment refer to Section 8. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

6.4. Reference to other sections

Personal protection – Section 8

Disposal – Section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For personal protection refer Section 8. Avoid contact with skin, eyes and clothing. Avoid inhaling vapor, mist, spray. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. In case of

inadequate ventilation, use individual respiratory protection. After handling wash hands with plenty of soap and water.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep under inert gas.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Substance is hygroscopic.

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

Substance	No.: CAS	Control parameters	Legal basis
Nicotine	54-11-5	TWA (8 h): 0,5 mg/m^3 STEL: 1.5 ppm 15 min	EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. After handling wash hands with plenty of soap and water. Do not eat, drink or smoke when using this product. In case of inadequate ventilation, use individual respiratory protection.

8.2.2. Individual protection measures, such as personal protective equipment

Eye and face protection

Face shield and safety goggles. Use equipment for eye protection tested and approved according EN 166(EU).

- After each use, clean the face shield or goggles and leave in the right conditions.

Skin protection

Hand protection

Handle with gloves. Gloves must be inspected before of use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Wash and dry hands.

Gloves must be tested and approved according Directive 89/686/EEC and EN 374 derived from it.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

- Before use, inspect the gloves.
- Before reuse inspected gloves.
- After using gloves, with the intention of using them again, they should be thoroughly rinsed with water, dried and left in proper conditions.

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 30 min

Body protection

Complete suit protecting against chemicals. The type of protective equipment should be selected according planed time of contact with substance. Suit should be tested and approved according EN943

Respiratory protection

With short contact with the substance and ensure proper ventilation, respiratory protection is not necessary. With a longer contact it is recommended to use a mask or half-mask filter.

- Filter class at least P2, recommended P3.

Respiratory protection should be adapted to eye protection. Remember to regularly and properly replace filters / absorbers.

Regular inspections of personal protective equipment should be carried out.

8.2.3. Environmental exposure controls

Dispose of unused substance in authorized units.
Dispose of empty packaging in authorized units.
Prevent the substance entering the sewage system, prevent contamination of soil and groundwater.
Prevent further leakage or spillage if safe to do so. Do not let product enter drains and ground water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance: colourless or yellowish to brownish liquid
b) Odour: characteristic
c) Odour threshold: not tested
d) pH: 10,2
e) Melting point/freezing point: -79°C
f) Initial boiling point and boiling range: 247 °C (993 hPa)
g) Flash point: 101 °C – closed cup
h) Evaporation rate: no data
i) Flammability (solid, gas): not applicable
j) Upper/lower flammability or explosive limits:
    a. Lower explosive limit: 0,7 %
    b. Upper explosive limit: 4%
k) Vapour pressure 0.051 hPa at 25 °C
l) Vapour density 5.6 - (Air = 1.0)
m) Relative density 1.010 g/cm^3 at 20 °C
n) Solubilities
    a. Water solubility: completely miscible
    b. Ethanol solubility: 50g/l
o) Partition coefficient: n-octanol/water: log Pow=1,17

p) Auto-ignition temperature: 240 °C
q) Decomposition temperature: 247°C
r) Viscosity: no data
s) Explosive properties: no data
t) Oxidizing properties: no data

9.2. Other information

No other information

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

Avoid heating closed containers with a substance above 95 ° C

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO2).

In case of fire – refer Section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

a) Acute toxicity

Substance	CAS No.	Exposure routes	Dose	Species	Source
Nicotine	54-11-5	Oral	LD50=70 mg/kg	Rat	Van den Heuvel et al., 1990
		Dermal	LD50=50 mg/kg	Rabbit	Contraft-Nicotex-Tabacco (2015a)
		Inhalation (aerosol)	LC50=0,19 mg/L	Rat	Shao et al., 2012

b) Skin corrosion/irritation

- Method: OECD Guideline 402
- Species: Rabbit (in vivo)
- Results: possible skin irritation with inflammation

c) Serious eye damage/irritation:
- Method: OECD Guideline no. 437
- Species: Bos primigenius Taurus; cornea, in vitro.
- Results: substance is not classified as corrosive to eyes

d) Respiratory or skin sensitisation
- No data

e) Germ cell mutagenicity
- Source: Maron, D. M., Ames, B. N. Revised Methods for the Salmonella Mutagenicity Test, Mutat. Res., 1983, 113, 173-215
- Species: Salmonella typhimurium
- Results: negative

f) Carcinogenicity
- According to research, this substance does not cause cancer

g) Reproductive toxicity
- Possible risk of congenital malformation in the foetus

h) STOT-single exposure
- the substance does not meet the criteria of classification

i) STOT-repeated exposure
- the substance does not meet the criteria of classification

j) Aspiration hazard
- the substance does not meet the criteria of classification

SECTION 12: Ecological information

12.1. Toxicity

Substance	CAS No.	Toxicity for aquatic organisms	Dose	exposure time	Species	Source
Nicotine	54-11-5	Toxicity to fish	LC50=4 mg/l	96 h	Oncorhynchus mykiss	ECOTOX
		Toxicity to crustaceans	EC50=11 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline test No 402
		Toxicity to crustaceans	LC50 =0,24 mg/L	48 h (static acute toxicity test)	Daphnia pulex	Hayes' Handbook of Pesticide Toxicology, vol. 1 (third edition 2010)

12.2. Persistence and degradability

Biodegradability
71 % degradation (CO2 evolution) 28 d;
OECD Guideline test No 402

12.3. Bioaccumulative potential

Octanol-water partition coefficient
log Pow = 1,17

OECD Guidelines for the Testing of Chemicals, test No 107

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance is not considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher according ANNEX XIII REACH Regulation.

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of in accordance with the Directive 2008/98/EC and regional regulations to a licensed disposal company.
Prevent from reaching into drains, sewer, or waterway.

Contaminated packaging

- Dispose of as unused product.

SECTION 14: Transport information

14.1. UN number

UN: 1654
IMDG: 1654
IATA: 1654

14.2. UN proper shipping name

ADR/RID: NICOTINE
IMDG: NICOTINE
IATA: Nicotine

14.3. Transport hazard class(es)

ADR/RID: 6.1
IMDG: 6.1
IATA: 6.1

14.4. Packing group

ADR/RID: II
IMDG: II
IATA: II

14.5. Environmental hazards

ADR/RID: Yes
IMDG Marine pollutant: Yes
IATA: No

14.6. Special precautions for user

Refer to section 6,7,8.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

SECTION 15: Regulatory information

The substance is subject to Regulation (EU) No 649/2012 Of the European Parliament and the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

The substance is subject to Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC as:

- H2 ACUTE TOXIC
- E2 Hazardous to the Aquatic Environment in Category Chronic 2

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

1. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
2. REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.
3. COMMISSION DIRECTIVE 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.

15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Abbreviation and acronyms

- ADR: Accord européen sur le transport des marchandises dangereuses par Route - European Agreement Concerning the International Carriage of Dangerous Goods by Road
- CAS Chemical Abstracts Service
- IARC: International Agency for Research on Cancer
- IMDG: International Maritime Code for Dangerous
- IATA: International Air Transport Association
- IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
- OECD - Organisation for Economic Co-operation and Development
- LC50: lethal dose, 50%
- LD50: median lethal dose
- PBT: Persistent bioaccumulative
- vPvB: very Persistent, very Bioaccumulative

Full text of H-Statements

H300: Fatal if swallowed.
H310: Fatal in contact with skin.
H330: Fatal if inhaled.
H411: Toxic to aquatic life with long lasting effects.

Full text of P-Statements

P262: Do not get in eyes, on skin, or on clothing.
P270: Do not eat, drink or smoke when using this product.
P282: Wear cold insulating gloves/face shield/eye protection.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

The information contained in this Safety Data Sheet has been prepared in accordance with the best knowledge of the preparer.
The information in this document not includes all situations that may occur at the workplace.
Before start of work with the substance, the personnel should be trained in handling the substance, the use of individual protection stuff and in the scope of the first aid. Preparation of mixtures with this substance should be preceded by deep analysis of hazards from physicochemical and toxicological properties – causing danger to the people and the environment.

End of Safety Data Sheet