



CHEMNOVATIC

# SAFETY DATA SHEET

Data of issue: 12.11.2013  
Date of update: 27.08.2024  
Version: 9.0/EN

[In accordance with the criteria of Regulation No 1907/2006 (REACH) as amended]

## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Commercial name: PureNic 99+  
Chemical name: nicotine  
Index number: 614-001-00-4  
REACH registration number: 01-2120066934-47-0004/01-2120066934-47-0011

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

Relevant identified uses: laboratory chemicals, production of mixtures.  
Uses advised against: not determined.

### 1.3 Details of the supplier of the safety data sheet

Supplier: Chemnovatic Sp. z o.o.  
Address: ul. Ludwika Spiessa 9, 20-270 Lublin, POLAND  
Telephone number: +48 81 475 44 42  
E-mail address for a competent person responsible for msds: office@chemnovatic.com

### 1.4 Emergency telephone number

112

## Section 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

### 2.2 Label elements

Hazard symbols and signal words



DANGER

Hazard statements

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

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P361 Remove/Take off immediately all contaminated clothing.  
P405 Store locked up.  
P501 Dispose of contents/container to container for waste.



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## 2.3 Other hazards

Substance does not meet the PBT or vPvB criteria in accordance with the Annex XIII of the REACH Regulation. The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## Section 3: Composition/information on ingredients

### 3.1 Substances

#### nicotine

Range of percentages: min. 99,0 %

CAS number: 54-11-5

EC number: 200-193-3

Index number: 614-001-00-4

Substance with a specific value at the Community level of the permissible concentration in the work environment.

## Section 4: First aid measures

### 4.1 Description of first aid measures

Skin contact: immediately take off contaminated clothing. Wash out skin with plenty of water with soap. Consult a doctor immediately.

Eye contact: wash out with plenty of water with the eyelid hold wide open, for 15 min. Remove any contact lenses. Avoid strong stream of water-risk of cornea damage. Seek medical advice if necessary.

Ingestion: do not induce vomiting. Rinse mouth with water. Do not give anything to drink to an unconscious person. Consult a doctor – show the container or label.

Inhalation: remove to fresh air. Keep warm and calm. Consult a doctor, if symptoms persist.

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

Eye contact: redness, tearing, mild irritation.

Ingestion: nausea, vomiting, in extreme cases: nausea, breathing problems, dizziness, respiratory disorders, death.

Skin contact: can cause irritation, breathing problems, dizziness, cramps, nausea, vomiting. It can be absorbed through the skin. At sensitive individuals may experience an allergic reaction.

Inhalation: following exposure to doses above permissible limits include: stimulation of breath, nausea, vomiting, headache, dizziness, diarrhea, tachycardia, increased blood pressure, sweating, salivation, burning sensation in the mouth, throat and stomach.

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

Physician makes a decision regarding further medical treatment after thoroughly examination of the injured.

## Section 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media: CO<sub>2</sub>, sand, dry chemical, water spray.

Unsuitable extinguishing media: water jet – risk of the propagation of the flame.

### 5.2 Special hazards arising from the substance or mixture

May produce toxic fumes of carbon and nitrogen oxides, if burning. Do not inhale combustion products, they can be dangerous for human health.

### 5.3 Advice for firefighters

Personal protection typical in case of fire. Do not stay in the fire-endangered area without appropriate chemical-resistant clothing and self-contained breathing apparatus. Wear suitable respiratory equipment. Cool down containers with water from safe distance to prevent bursting.



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Advice for firefighters: Put on breathing apparatus. Wear self-contained breathing apparatus. Wear full protective suit.

## Section 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures  
Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. In case of large spills, isolate the exposed area. Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid contact with spilled material. Danger of slipping, do not pass through spilled material. Do not allow the product to get into mouth. Wear adequate personal protective equipment.
- 6.2 Environmental precautions  
In case of release of large amounts of the product, it is necessary to take appropriate steps to prevent it from spreading into the environment. The material may be harmful to the environment when released in large quantities. Notify relevant emergency services.
- 6.3 Methods and material for containment and cleaning up  
Soak up with liquid-binding material (e.g. sand, earth, universal binders, silica, vermiculite, etc.). Collect spilled material in containers. Disposal in accordance with the local legislation. Clean the contamination place. Dilute the spillage with much amount of water. Do not allow to enter drainage system, surface or ground water. Keep dirty washing water for appropriate disposal.
- 6.4 Reference to other sections  
Appropriate conduct with waste product – see section 13.  
Personal protective equipment – see section 8.

## Section 7: Handling and storage

- 7.1 Precautions for safe handling  
Handle in accordance with good occupational hygiene and safety practices. Avoid contact with skin and eyes. Do not inhale vapours. Ensure adequate ventilation. Before break and after work wash carefully hands. Keep not used containers tightly closed. Do not allow the product to get into mouth. Use personal protection measures.
- 7.2 Conditions for safe storage, including any incompatibilities  
Keep containers tightly closed in cool and well-ventilated area. Keep away from food, beverages or feed for animals. Once opened container should be used immediately. Avoid heat and ignition sources. Store at about 0-10 °C in a well closed containers under nitrogen/argon atmosphere, protected from light. Once the container has been opened, its contents must be used immediately. Avoid sources of heat and fire.
- 7.3 Specific end use(s)  
No information on uses other than those listed in subsection 1.2.

## Section 8: Exposure controls/personal protection

### 8.1 Control parameters

Specification	TWA 8 hour	STEL 15 min
nicotine [CAS 54-11-5]	—	0,5 mg/m <sup>3</sup> (skin)

Legal Basis: 91/322/EEC as amended, 98/24/EC as amended, 2000/39/EC as amended, 2004/37/EC as amended.

The table above shows the maximum workplace concentration values at the Community level.

Please check any national occupational exposure limit values in your country.



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## 8.2 Exposure controls

### Appropriate engineering controls

Use the product in accordance with good occupational hygiene and safety practices. Ensure adequate ventilation. When handling do not eat, drink or smoke. Before break and after work carefully wash hands. In the vicinity of the work should be installed safety showers and separate washer eyewash. At the exit of the room in which you are working with toxic materials should be at least one sink with brought to the warm water - for every twenty employees.



### Personal protection

The necessity to use and selection of appropriate personal protective equipment should take into account the type of hazard posed by the product, workplace conditions and the manner of handling the product. Applied personal protective equipment must comply with the requirements of the Regulation 2016/425/EU. The employer is obliged to provide protective equipment relevant to performed activities and in accordance with all quality requirements, including its maintenance and cleaning. Any contaminated or damaged personal protective equipment must be replaced immediately.

### Hand and body protection

Use type B protective gloves in accordance with ISO 374-1: 2016. Wear the protective gloves (long-term exposure – butyl rubber, thickness: 0,3 mm, penetration time: >480 min., short-term exposure: nitrile rubber, thickness: 0,4 mm, penetration time: >30 min.) and protective clothing.

When using protective gloves during work with chemical products, it should be noted that the efficacy levels and corresponding breakthrough times do not indicate actual times of protection at a particular workplace, because the protection can be affected by many factors, e.g. temperature, other substances etc. If there are any signs of degradation, damage or change in appearance (colour, flexibility, shape), it is recommended to replace the gloves with a new pair. Please follow the manufacturer's instructions, not only in terms of gloves' usage, but also in terms of their cleaning, maintenance and storage. It is also important to know how to take off the gloves in order to avoid hands contamination.

### Eye/face protection

Depending on the exposure level, use goggles compliant with the EN166 standard or tight protective goggles or face protection.

### Respiratory protection

Requirement of using a mask with an absorber and ensuring adequate ventilation: When working with the substance, work with a mask meeting the EN140 standard, equipped with an absorber that meets the EN14387 "2004 + A1: 2008 or EN14387: 2006 standard. Provide adequate ventilation.

### Thermal hazards

Not applicable.

### Environmental exposure controls

Do not allow the mixture to contaminate surface water/ground water.

## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	from transparent to straw-colored, light brown
Odour:	characteristic, irritant
Melting point/freezing point:	-79 °C
Boiling point or initial boiling point and boiling range:	248,8 °C
Flammability:	flammable product
Lower and upper explosion limit:	not determined
Flash point:	111°C (101 325 Pa)
Auto-ignition temperature:	240 °C (101 325 Pa)
Decomposition temperature:	not determined
pH:	9,0-11,5



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Kinematic viscosity:	2,7 mPa*s (25 °C) 1,6 mPa*s (50 °C)
Solubility:	soluble in water
Partition coefficient n-octanol/water (log value):	log Pow: 1,17
Vapour pressure:	0,006 kPa
Density and/or relative density:	1,01 g/cm <sup>3</sup>
Relative vapour density:	5,81 Pa (air=1)
Particle characteristics:	not applicable

### 9.2 Other information

No additional data.

## Section 10: Stability and reactivity

### 10.1 Reactivity

See also subsections 10.3-10.5.

### 10.2 Chemical stability

The product is stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Dangerous reactions are not known.

### 10.4 Conditions to avoid

Avoid direct sunlight and sources of ignition.

### 10.5 Incompatible materials

Strong oxidizers.

### 10.6 Hazardous decomposition products

Unknown.

## Section 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Fatal if inhaled. Fatal in contact with skin. Fatal if swallowed.

The acute toxicity of a mixture (ATEmix) was determined using the estimated acute toxicity (ATE) used for the classification of acute toxicity to human health in mixtures containing nicotine in accordance with Commission Regulation (EU) 2017/776 of 4 May 2017 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

ATE (oral)	5 mg/kg
ATE (skin)	70 mg/kg
ATE (inhalation - mist)	0,19 mg/l

Moreover, after large doses of nicotine symptoms such as burn in the oral cavity, throat and stomach were stated. They were followed by exhaustion, seizure, worsening of respiration, irregular heartbeat and impaired motor coordination and coma. In such case death can occur within 5 min to 4 hrs.

Chronic nicotine poisoning leads to cardiovascular disorders. Vascular changes promote occurrence of angina pectoris and heart attacks, and they cause: memory disorders, slow cerebration and thoughts coordination deterioration, lack of energy and general exhaustion as well. Also alimentary canal disorders are observed.

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.



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## Serious eye damage/irritation

Based on available data, the classification criteria are not met.

## Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

## Germ cell mutagenicity

Based on available data, the classification criteria are not met.

## Carcinogenicity

Based on available data, the classification criteria are not met.

## Reproductive toxicity

Based on available data, the classification criteria are not met.

## STOT-single exposure

Based on available data, the classification criteria are not met.

## STOT-repeated exposure

Based on available data, the classification criteria are not met.

## Aspiration hazard

Based on available data, the classification criteria are not met.

## 11.2 Information on other hazards

### Endocrine disrupting properties

The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

### Other information

Not applicable.

## Section 12: Ecological information

### 12.1 Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Acute toxicity for fish LC<sub>50</sub>: 4 mg/l/96h *Oncorhynchus mykiss*

Acute toxicity for invertebrates EC<sub>50</sub>: 0,24 mg/l/48h *Daphnia magna*

### 12.2 Persistence and degradability

Biodegradation: 71% after 28 days (OECD 301B method)

### 12.3 Bioaccumulative potential

Log P<sub>o/w</sub> = 1,17\* (pH=12)

\*J. W. Gorrod, *Determination of partition coefficients and ionisation constants of (S)(-)- nicotine and certain metabolites*, Med. Sci. Res., 20, 901-902, 1992.

### 12.4 Mobility in soil

Product is mobile in soil and in water.

### 12.5 Results of PBT and vPvB assessment

Substance does not meet criteria as PBT and vPvB.

### 12.6 Endocrine disrupting properties

The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.



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## 12.7 Other adverse effects

The substance does not affect global warming and ozone layer depletion. Consider other harmful effects of individual components of the mixture on the environment (e.g. global warming potential).

## Section 13: Disposal considerations

### 13.1 Waste treatment methods

Disposal methods for the product: disposal in accordance with the local legislation. Store remainings in original containers. Do not empty into drains.

Disposal methods for used packing: reuse/recycling/liquidation of empty containers dispose in accordance with the local legislation. Do not dispose empty packing with regular household waste. Do not mix with other waste.

Legal basis: Directive 2008/98/EC as amended, 94/62/EC as amended.

## Section 14: Transport information

### 14.1 UN number or ID number

ADR: UN 1654

IMDG: UN 1654

IATA: UN 1654



### 14.2 UN proper shipping name

ADR: NICOTINE

IMDG: NICOTINE

IATA: NICOTINE



### 14.3 Transport hazard class(es)

ADR: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packing group

ADR: II

IMDG: II

IATA: II

### 14.5 Environmental hazards

Hazardous for the environment according to the transport regulations.

### 14.6 Special precautions for user

Use protective measures according to section 8.

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

#### Other information

ADR	limited number of LQ:	100 ml
	hazard identification number:	60
	special provision:	-
	transport category:	2
	code tunnel restriction:	D / E
IMDG	EmS code:	F-A / S-A
	environmental hazard / marine pollutant:	yes / yes



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## Section 15: Regulatory information

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

ADR Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG Code International Maritime Dangerous Goods Code.

IATA Dangerous Goods Regulations.

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 as amended.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization 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 as amended.

Commission Regulation (EU) No 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste as amended.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives as amended.

Regulation (EU) No 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.

Directive 2004/37/EC Of The European Parliament and Of The Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (Sixth individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC) as amended.

2000/39/EC Commission Directive of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work as amended.

Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) as amended.

91/322/ECC Commission Directive of 29 May 1991 on establishing indicative limit values by implementing Council Directive 80/1107/EEC on the protection of workers from the risks related to exposure to chemical, physical and biological agents at work as amended.

### 15.2 Chemical safety assessment

Chemical safety assessment has not been carried out for the substance.

## Section 16: Other information

### Clarification of aberrations and acronyms

TWA Time Weighted Average

STEL Short-term exposure limit

Acute Tox. 2 Acute Toxicity category 2

Aquatic Chronic 2 Hazardous to the aquatic environment category 2

### Trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training.

### Key literature references and data sources

Safety data sheet was drawn up on the basis provided by the distributor sheet, online databases (e.g. ECHA, TOXNET, COSING) as well as knowledge and experience, taking into account the current legislation.

### Other data

Changes: section: 1-16

Safety Data Sheet made by: THETA Consulting Sp. z o.o.





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The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. That does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.

SAMPLE DOCUMENT