

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.04.2016

Revision: 30.03.2016

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

- **1.1 Product identifier**
- **Trade name: Nicotine**
- **Article number:**
183785, 183784, 183796, 183821, 183786, 183781, 183782, 183789, 291142, 293009, 295894, 295893, 295947, 298779, 298785
- **CAS Number:**
54-11-5
- **EC number:**
200-193-3
- **Index number:**
614-001-00-4
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU9 Manufacture of fine chemicals
- **Product category**
PC19 Intermediate
PC21 Laboratory chemicals
- **Application of the substance / the mixture** Additional component
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Siegfried AG
Untere Brühlstrasse 4
CH-4800 Zofingen
Tel. +41 62 746 12 12
Fax +41 62 746 12 02
- **Informing department:**
Tel. +41 62 746 14 78
Fax +41 62 746 14 01
E-Mail: she@siegfried.ch
- **1.4 Emergency telephone number:**
TOX CENTER (Toxikologisches Informationszentrum Schweiz), Zürich, Tel. 145 (CH)
(Tel. +41 44 251 51 51)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 1 H310 Fatal in contact with skin.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS06, GHS09
- **Signal word** Danger
- **Hazard statements**
H301 Toxic if swallowed.

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H310 Fatal in contact with skin.

H400 Very toxic to aquatic life.

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/ doctor.

P361 Take off immediately all contaminated clothing.

P322 Specific measures (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:**

No data available

Due to the water-solubility and biodegradability, persistence and bioaccumulation is unlikely.

- **vPvB:**

Not applicable.

Due to the water-solubility and biodegradability, persistence and bioaccumulation is unlikely.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**

- **CAS No. Designation:**

54-11-5 Nicotine

- **Identification number(s):** n/a

- **EC number:** 200-193-3

- **Index number:** 614-001-00-4

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information**

Instantly remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

- **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.

Instantly rinse with water.

- **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**

No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.

- **5.2 Special hazards arising from the substance or mixture**

Can be released in case of fire

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

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- **5.3 Advice for firefighters**
- **Protective equipment:**
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**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Inform respective authorities in case product reaches water or sewage system.
Dilute with much water.
Do not allow to enter drainage system, surface or ground water.
Keep dirty washing water for appropriate disposal.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Protect from the effects of light.
Avoid contact with air / oxygen.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:**

54-11-5 Nicotine (50-100%)

WEL	Short-term value: 1.5 mg/m ³
	Long-term value: 0.5 mg/m ³
Sk	

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.

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Take off immediately all contaminated clothing
 Wash hands during breaks and at the end of the work.
 Store protective clothing separately.
 Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Filter A

- **Protection of hands:**

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Tightly sealed safety glasses.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Oily
Colour:	Light yellow
Odour:	Characteristic
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	-80 °C
Boiling point/Boiling range:	125/24mbar °C

- **Flash point:** 101 °C

- **Inflammability (solid, gaseous)** Not applicable.

- **Ignition temperature:** 240 °C

- **Decomposition temperature:** Not determined.

- **Self-inflammability:** Not determined.

- **Danger of explosion:** Product is not explosive.

- **Critical values for explosion:**

Lower:	0.7 Vol %
Upper:	4 Vol %

- **Vapour pressure at 20 °C:** 0.056 hPa

- **Density at 20 °C** 1.0092 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.

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- | | |
|---|--|
| · Solubility in / Miscibility with Water: | Fully miscible |
| · Partition coefficient (n-octanol/water): | 14.8 |
| · Viscosity: | |
| dynamic: | Not determined. |
| kinematic: | Not determined. |
| · 9.2 Other information | No further relevant information available. |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Stable at ambient temperature
- **10.3 Possibility of hazardous reactions** Reacts with acids, alkalis and oxidizing agents
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Toxic if swallowed.
Fatal in contact with skin.

· LD/LC50 values that are relevant for classification:		
Oral	LD50	50 mg/kg (rat)
Dermal	LD50	50 mg/kg (rab)

- | | | |
|--------|------|----------------|
| Oral | LD50 | 50 mg/kg (rat) |
| Dermal | LD50 | 50 mg/kg (rab) |
- **Primary irritant effect:**
 - **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
 - **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.
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **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.

SECTION 12: Ecological information

- **12.1 Toxicity**

· Aquatic toxicity:	
EC50 Daphnia Tox	0.242 mg/l (daphne)

- | | |
|------------------|---------------------|
| EC50 Daphnia Tox | 0.242 mg/l (daphne) |
|------------------|---------------------|
- **12.2 Persistence and degradability** biodegradable
 - **12.3 Bioaccumulative potential** No further relevant information available.
 - **12.4 Mobility in soil** No further relevant information available.
 - **Ecotoxicological effects:**
 - **Remark:** Very toxic for fish

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- **Additional ecological information:**
- **General notes:**
Water danger class 3 (German Regulation) (Assessment by list): extremely hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Due to the water-solubility and biodegradability, persistence and bioaccumulation is unlikely.
- **vPvB:** Due to the water-solubility and biodegradability, persistence and bioaccumulation is unlikely.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated under adherence to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR,RID, IMDG, IATA | UN1654 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR/RID · IMDG, IATA | 1654 NICOTINE, ENVIRONMENTALLY HAZARDOUS
NICOTINE |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR/RID | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> · Class · Label | 6.1 Toxic substances.
6.1 |
| <ul style="list-style-type: none"> · IMDG, IATA | <div style="display: flex; align-items: center; gap: 10px;">  </div> |
| <ul style="list-style-type: none"> · Class · Label | 6.1 Toxic substances.
6.1 |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR,RID, IMDG, IATA | II |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: | Environmentally hazardous substance, liquid;
Marine Pollutant |

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· Marine pollutant:	No
· Special marking (ADR/RID):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Toxic substances.
· Kemler Number:	60
· EMS Number:	F-A,S-A
· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR/RID	
· Limited quantities (LQ)	100 ml
· Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	100 ml
· Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1654 NICOTINE, 6.1, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 t
- **National regulations**
- **Decree to be applied in case of technical fault:**
Critical quantity values according to the regulations on accidents should be adhered to.
- **Technical instructions (air):**

Class	Share in %
I	100.0

- **Water hazard class:** Water danger class 3 (Assessment by list): extremely hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing data specification sheet:** Safety and security
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association

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GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 1: Acute toxicity, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

GB