acc. to Regulation (EC) No. 1907/2006 (REACH)



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#### 3-Chloroaniline ≥98 %, for synthesis

article number: **1C3E** Version: **2.0 en** Replaces version of: 2020-05-26 Version: (1)

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

## 1.1 Product identifier

Identification of the substance	<b>3-Chloroaniline</b> ≥98 %, for synthesis
Article number	1C3E
EC number	203-581-0
CAS number	108-42-9

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

Relevant identified uses:

Uses advised against:

Laboratory and analytical use Laboratory chemical

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

**Telephone:**+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment sheet:

#### e-mail (competent person):

## sicherheit@carlroth.de

#### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

# **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

#### **Classification acc. to GHS**

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.10	Acute toxicity (oral)	3	Acute Tox. 3	H301
3.1D	Acute toxicity (dermal)	3	Acute Tox. 3	H311
3.1I	Acute toxicity (inhal.)	3	Acute Tox. 3	H331

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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.9	Specific target organ toxicity - repeated exposure	2	STOT RE 2	H373
4.1A	Hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	Hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure. Spillage and fire water can cause pollution of watercourses.

#### 2.2 Label elements

## Labelling

Signal word Danger

#### **Pictograms**



#### **Hazard statements**

H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled
H373	May cause damage to organs through prolonged or repeated exposure
H410	Very toxic to aquatic life with long lasting effects

#### **Precautionary statements**

#### **Precautionary statements - prevention**

P260	Do not breathe mist/vapours/spray
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection

#### **Precautionary statements - response**

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor
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

## 2.3 Other hazards

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

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# SECTION 3: Composition/information on ingredients

3.1	Substances				
	Name of substance	3-Chloroaniline			
	Molecular formula	C <sub>6</sub> H <sub>6</sub> CIN			
	Molar mass	127,6 <sup>g</sup> / <sub>mol</sub>			
	CAS No	108-42-9			
	EC No	203-581-0			

Su	Substance, Specific Conc. Limits, M-factors, ATE				
	Specific Conc. Limits	M-Factors	ATE	Exposure route	
	-	-	100 <sup>mg</sup> / <sub>kg</sub> 300 <sup>mg</sup> / <sub>kg</sub> 3 <sup>mg</sup> / <sub>l</sub> /4h	oral dermal inhalation: vapour	

# **SECTION 4: First aid measures**

### 4.1 Description of first aid measures



#### **General notes**

Take off immediately all contaminated clothing. Self-protection of the first aider.

#### Following inhalation

Call a physician immediately. If breathing is irregular or stopped, administer artificial respiration.

#### Following skin contact

After contact with skin, wash immediately with plenty of water.

#### Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

#### **Following ingestion**

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

Irritant effects, Has degreasing effect on the skin, Nausea, Vomiting, Headache, Cough, Dyspnoea, Spasms, Blood pressure drop, Cardiac arrhythmias, Methaemoglobinaemia, Cyanosis (blue coloured blood)

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

none

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# SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Combustible.

#### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen chloride (HCl)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

# **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

#### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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# **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling

Provision of sufficient ventilation. Use extractor hood (laboratory). Handle and open container with care. Clear contaminated areas thoroughly.

## Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

When using do not eat or drink. Thorough skin-cleansing after handling the product.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. May cause decomposition by long-term light influence.

### Incompatible substances or mixtures

Observe hints for combined storage.

#### Protect against external exposure, such as

UV-radiation/sunlight, contact with air/oxygen

#### Consideration of other advice:

Store locked up.

### **Ventilation requirements**

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

## Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

## 7.3 Specific end use(s)

No information available.

# **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

## **National limit values**

## **Occupational exposure limit values (Workplace Exposure Limits)**

This information is not available.

#### Human health values

Relevant DN	Relevant DNELs and other threshold levels			
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	0,367 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	0,208 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

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Relevant PNECs and other threshold levels				
End- point	Threshold level	Organism	Environmental com- partment	Exposure time
PNEC	0,003 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	freshwater	short-term (single instance)
PNEC	0 <sup>mg</sup> /l	aquatic organisms	marine water	short-term (single instance)
PNEC	9,9 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	0,753 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0,753 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0,331 <sup>mg</sup> / <sub>kg</sub>	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

## Individual protection measures (personal protective equipment)

### Eye/face protection



Use safety goggle with side protection.

#### **Skin protection**



#### hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

#### type of material

Butyl caoutchouc (butyl rubber)

#### material thickness

≥0,5 mm

#### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### • Splash protection - Protective gloves

- type of material: NR: natural rubber, latex
- material thickness: 0,65 mm
- breakthrough times of the glove material:

>30 minutes (permeation: level 2)

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#### other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

#### **Respiratory protection**



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65  $^{\circ}$ C, colour code: Brown).

#### **Environmental exposure controls**

Keep away from drains, surface and ground water.

# **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless - light yellow
Odour	characteristic
Melting point/freezing point	-10,28 °C (ECHA)
Boiling point or initial boiling point and boiling range	168,8 °C at 960 hPa (ECHA)
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	110 °C at 960 hPa (ECHA)
Auto-ignition temperature	>500 °C
Decomposition temperature	>190 °C
pH (value)	not determined (neutral)
Kinematic viscosity	16,37 <sup>mm²</sup> / <sub>s</sub> at 30 °C
Dynamic viscosity	19,41 mPa s at 30 °C
Solubility(ies)	
Water solubility	20 <sup>g</sup> / <sub>l</sub> at 30 °C (ECHA)
Partition coefficient	
Partition coefficient n-octanol/water (log value):	this information is not available
Soil organic carbon/water (log KOC)	2,398 (ECHA)
Vapour pressure	8,799 Pa at 25 °C
Density and/or relative density	



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Density	1,186 <sup>g</sup> / <sub>cm³</sub> at 30 °C (ECHA)
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)
Other safety parameters	
Oxidising properties	none
Other information	
Information with regard to physical hazard classes:	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics:	
Surface tension	45,3 <sup>mN</sup> / <sub>m</sub> (25 °C) (ECHA)

# SECTION 10: Stability and reactivity

#### 10.1 Reactivity

9.2

This material is not reactive under normal ambient conditions.

### If heated

Vapours may form explosive mixtures with air.

#### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

#### **10.3** Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser, Carboxylic acid anhydride, Acetic anhydride, Acids, Acid chlorides, inorganic

#### 10.4 Conditions to avoid

UV-radiation/sunlight. Keep away from heat. Decompostion takes place from temperatures above: >190 °C.

### **10.5** Incompatible materials

different plastics

#### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

# **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Classification acc. to GHS

#### Acute toxicity

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

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

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#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

## Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

## Carcinogenicity

Shall not be classified as carcinogenic.

### **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

#### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

vomiting, nausea

#### • If in eyes

causes slight to moderate irritation

#### • If inhaled

headache, cough, Dyspnoea

#### • If on skin

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation)

#### Other information

Other adverse effects: Liver and kidney damage, Cardiac arrhythmias, Blood pressure drop, Spasms, Methaemoglobinaemia, Cyanosis (blue coloured blood)

#### 11.2 Endocrine disrupting properties

Not listed.

## 11.3 Information on other hazards

There is no additional information.

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# **SECTION 12: Ecological information**

#### 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

#### **Biodegradation**

Data are not available.

#### 12.2 Process of degradability

Theoretical Oxygen Demand with nitrification: 2,069 <sup>mg</sup>/<sub>mg</sub> Theoretical Oxygen Demand: 1,63 <sup>mg</sup>/<sub>mg</sub> Theoretical Carbon Dioxide: 2,07 <sup>mg</sup>/<sub>mg</sub>

## 12.3 Bioaccumulative potential

Data are not available.

#### 12.4 Mobility in soil

Henry's law constant	0,143 <sup>Pa m³</sup> / <sub>mol</sub> at 25 °C (ECHA)		
The Organic Carbon normalised adsorption coefficient	2,398 (ECHA)		

#### 12.5 Results of PBT and vPvB assessment

Data are not available.

- **12.6 Endocrine disrupting properties** Not listed.
- 12.7 Other adverse effects

Data are not available.

# **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

#### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

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SECTION 14. Transport information

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SEC	110N 14. Transport mormation	
14.1	UN number or ID number	
	ADRRID	UN 2019
	IMDG-Code	UN 2019
	ICAO-TI	UN 2019
14.2	UN proper shipping name	
	ADRRID	CHLOROANILINES, LIQUID
	IMDG-Code	CHLOROANILINES, LIQUID
	ICAO-TI	Chloroanilines, liquid
14.3	Transport hazard class(es)	
	ADRRID	6.1
	IMDG-Code	6.1
	ICAO-TI	6.1
14.4	Packing group	
	ADRRID	II
	IMDG-Code	II
	ICAO-TI	II
14.5	Environmental hazards	hazardous to the aquatic environment

## 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

# 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

## 14.8 Information for each of the UN Model Regulations

# Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

Proper shipping name	CHLOROANILINES, LIQUID
Particulars in the transport document	UN2019, CHLOROANILINES, LIQUID, 6.1, II, (D/E), environmentally hazardous
Classification code	T1
Danger label(s)	6.1, "Fish and tree"
Environmental hazards	<b>Yes</b> (hazardous to the aquatic environment)
Special provisions (SP)	802(ADN)
Excepted quantities (EQ)	E4
Limited quantities (LQ)	100 ml

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Transport category (TC)	2
Tunnel restriction code (TRC)	D/E
Hazard identification No	60
Emergency Action Code	2X
Regulations concerning the International information	Carriage of Dangerous Goods by Rail (RID)Additional
Classification code	T1
Danger label(s)	6.1 Fish and tree
Environmental hazards	Yes Hazardous to water
Special provisions (SP)	802(ADN)
Excepted quantities (EQ)	E4
Limited quantities (LQ)	100 ml
Transport category (TC)	2
Hazard identification No	60
International Maritime Dangerous Goods	Code (IMDG) - Additional information
Proper shipping name	CHLOROANILINES, LIQUID
Particulars in the shipper's declaration	UN2019, CHLOROANILINES, LIQUID, 6.1, II, MAR- INE POLLUTANT
Marine pollutant	<b>Yes</b> (hazardous to the aquatic environment)
Danger label(s)	6.1, "Fish and tree"
Special provisions (SP)	-
Excepted quantities (EQ)	E4
Limited quantities (LQ)	100 mL
EmS	F-A, S-A
Stowage category	А
International Civil Aviation Organization (	(ICAO-IATA/DGR) - Additional information
Proper shipping name	Chloroanilines, liquid
Particulars in the shipper's declaration	UN2019, Chloroanilines, liquid, 6.1, II
Environmental hazards	<b>Yes</b> (hazardous to the aquatic environment)
Danger label(s)	6.1

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Excepted quantities (EQ)	E4	

Limited quantities (LQ)

1 L

# SECTION 15: Regulatory information

#### Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1 **Relevant provisions of the European Union (EU)**

### **Seveso Directive**

#### 2012/18/EU (Seveso III)

Νο	Dangerous substance/hazard categories	Qualifying quantity (to plication of lower and quiremer		Notes	
H2	acute toxic (cat. 2 + cat. 3, inhal.)	50	200	41)	

#### Notation

- Category 2, all exposure routes - category 3, inhalation exposure route 41)

### **Deco-Paint Directive**

VOC content	100 %
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#### **Industrial Emissions Directive (IED)**

VOC content	0 %
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#### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

#### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

#### Water Framework Directive (WFD)

# List of pollutants (WFD)

Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
3-Chloroaniline	Organohalogen compounds and substances which may form such compounds in the aquatic envir- onment		a)	

#### Legend A)

Indicative list of the main pollutants

## Regulation on the marketing and use of explosives precursors

not listed

## **Regulation on drug precursors**

not listed

## **Regulation on substances that deplete the ozone layer (ODS)**

not listed

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Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

## **Regulation on persistent organic pollutants (POP)**

not listed

## National regulations(GB)

# List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list not listed

### **Restrictions according to GB REACH, Annex 17**

ngerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
3-Chloroaniline	this product meets the criteria for classi- fication in accordance with Regulation No 1272/2008/EC		3

#### **Other information**

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

#### National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

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#### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

# **SECTION 16: Other information**

## Indication of changes (revised safety data sheet)

Alignment to regulation: Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Delayed or immediate effects can be expected after short or long-term exposure. Spillage and fire water can cause pollution of watercourses.	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes

#### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations	
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de naviga- tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In- land Waterways)	
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road)	
ATE	Acute Toxicity Estimate	
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)	
DGR	Dangerous Goods Regulations (see IATA/DGR)	
DNEL	Derived No-Effect Level	
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi- fier of substances commercially available within the EU (European Union)	
EINECS	European Inventory of Existing Commercial Chemical Substances	

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Abbr.	Descriptions of used abbreviations	
ELINCS European List of Notified Chemical Substances		
EmS	Emergency Schedule	
GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended		
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions	
IATA	International Air Transport Association	
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)	
ICAO	International Civil Aviation Organization	
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air	
IMDG	International Maritime Dangerous Goods Code	
IMDG-Code	International Maritime Dangerous Goods Code	
NLP	No-Longer Polymer	
РВТ	Persistent, Bioaccumulative and Toxic	
PNEC	Predicted No-Effect Concentration	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals	
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)	
VOC	Volatile Organic Compounds	
vPvB	Very Persistent and very Bioaccumulative	

#### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Code	Text
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

## Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.