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

#### 2-Chlorophenol ≥98 %, for synthesis

article number: 1C31 Version: 2.0 en Replaces version of: 2020-05-22 Version: (1)

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

**Product identifier** 1.1

Identification of the substance	<b>2-Chlorophenol</b> ≥98 %, for synthesis	
Article number	1C31	
EC number	202-433-2	
CAS number	95-57-8	
Pelevant identified uses of the substance or mixture and uses advised against		

#### 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 squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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

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):

#### **Emergency telephone number** 1.4

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**



date of compilation: 2020-05-22

Revision: 2022-05-06

sicherheit@carlroth.de

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Section	n Hazard class		Hazard class and category	Hazard statement
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.1D	Acute toxicity (dermal)	4	Acute Tox. 4	H312
3.1I	Acute toxicity (inhal.)	4	Acute Tox. 4	H332
3.2	Skin corrosion/irritation	1A	Skin Corr. 1A	H314
4.1C	Hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of abbreviations: see SECTION 16

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

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

#### 2.2 Label elements

Labelling

**Signal word** Danger

**Pictograms** 

GHS09



#### **Hazard statements**

H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled
H314	Causes severe skin burns and eye damage
H411	Toxic to aquatic life with long lasting effects

#### **Precautionary statements**

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

P280 Wear protective gloves/protective clothing/eye protection/face protection

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

P301+P330+P331 P303+P361+P353	IF SWALLOWED: rinse mouth. Do NOT induce vomiting IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
P304+P340 P305+P351+P338	IF INHALED: Remove person to fresh air and keep comfortable for breathing IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310	Immediately call a POISON CENTER/doctor

#### 2.3 **Other hazards**

This material is combustible, but will not ignite readily.

#### **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	2-Chlorophenol	
	Molecular formula	C <sub>6</sub> H₅CIO	
	Molar mass	128,6 <sup>g</sup> / <sub>mol</sub>	
	CAS No	95-57-8	
	EC No	202-433-2	

Substance, Specific Conc. Limits, M-factors, ATE			
Specific Conc. Limits	M-Factors	ATE	Exposure route
-	-	>1.000 <sup>mg</sup> / <sub>kg</sub> >1.000 <sup>mg</sup> / <sub>kg</sub> 11 <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**

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

#### Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

#### **Following ingestion**

Rinse mouth immediately and drink plenty of water. Rinse mouth with water (only if the person is conscious). Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

Irritant effects, Cough, Dyspnoea, Vomiting, Corrosion, Gastric perforation, Risk of blindness

#### 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. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

#### Hazardous combustion products

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

#### 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. Handle and open container with care. Clear contaminated areas thoroughly.

#### Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

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

Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

#### **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.

#### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection. Wear face protection.

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#### 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

breakthrough times of the glove material:

>480 minutes (permeation: level 6)

#### • Splash protection - Protective gloves

- type of material: CR: chloroprene (chlorobutadiene) rubber
- material thickness: 0,65 mm

>30 minutes (permeation: level 2)

#### • 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 °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	7 °C (ECHA)
Boiling point or initial boiling point and boiling range	174,9 °C at 1.013 hPa (ECHA)



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	Flammability	this material is combustible, but will not ignite readily
	Lower and upper explosion limit	not determined
	Flash point	64 °C at 1.013 hPa (ECHA)
	Auto-ignition temperature	550 °C at 1.013 hPa (ECHA)
	Decomposition temperature	not relevant
	pH (value)	not determined
	Kinematic viscosity	not determined
	Solubility(ies)	
	Water solubility	22,66 <sup>g</sup> / <sub>l</sub> at 24,6 °C (ECHA)
	Partition coefficient	
	Partition coefficient n-octanol/water (log value):	2,18 (20 °C) (ECHA)
	Vapour pressure	1,33 hPa at 12,1 °C 13,33 hPa at 51,2 °C
	Density and/or relative density	
	Density	1,248 <sup>g</sup> / <sub>cm³</sub> at 20 °C (ECHA)
	Relative vapour density	4,4 at 20 °C (air = 1)
	Particle characteristics	not relevant (liquid)
	Other safety parameters	
	Oxidising properties	none
9.2	Other information	
	Information with regard to physical hazard classes:	hazard classes acc. to GHS (physical hazards): not relevant
	Other safety characteristics:	
	Gas group (explosion group)	IIA Maximum Experimental Safe Gap value; MESG > 0,9 mm
	Surface tension	40,5 <sup>mN</sup> / <sub>m</sub> (25 °C) (ECHA)

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### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

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, **Dangerous/dangerous reactions with:** Aluminium, Copper, Carboxylic acid anhydride, Acetic anhydride, Strong alkali, Acid chlorides, inorganic

#### 10.4 Conditions to avoid

Keep away from heat.

#### 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

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

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	>1.000 - <2.000 <sup>mg</sup> / <sub>kg</sub>	rat		ECHA
inhalation: vapour	LC50	≥4,77 <sup>mg</sup> / <sub>l</sub> /4h	rat		ECHA
dermal	LD50	>1.000 - <1.580 <sup>mg</sup> / <sub>kg</sub>	rat		ECHA

#### Skin corrosion/irritation

Causes severe skin burns and eye damage.

#### Serious eye damage/eye irritation

Causes serious eye damage.

#### **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.

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#### 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

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

#### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

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

#### • If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

#### • If in eyes

causes burns, Causes serious eye damage, risk of blindness

#### If inhaled

irritant effects, cough, Dyspnoea

#### • If on skin

causes severe burns, causes poorly healing wounds

#### Other information

Other adverse effects: Cardiovascular system, Liver and kidney damage

#### **11.2** Endocrine disrupting properties

Not listed.

#### 11.3 Information on other hazards

There is no additional information.

#### **SECTION 12: Ecological information**

#### 12.1 Toxicity

Toxic to aquatic life with long lasting effects.

#### **Biodegradation**

Not readily biodegradable.

#### 12.2 Process of degradability

Theoretical Oxygen Demand: 1,618 <sup>mg</sup>/<sub>mg</sub> Theoretical Carbon Dioxide: 2,054 <sup>mg</sup>/<sub>mg</sub>

#### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)

2,18 (20 °C) (ECHA)

#### 12.4 Mobility in soil

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Data are not available.

- **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.

### **SECTION 14: Transport information**

#### 14.1 UN number or ID number

	ADRRID	UN 2021
	IMDG-Code	UN 2021
	ICAO-TI	UN 2021
14.2	UN proper shipping name	
	ADRRID	CHLOROPHENOLS, LIQUID
	IMDG-Code	CHLOROPHENOLS, LIQUID
	ICAO-TI	Chlorophenols, liquid
14.3	Transport hazard class(es)	
	ADRRID	6.1
	IMDG-Code	6.1
	ICAO-TI	6.1

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articie	e number. ICSI	
14.4	Packing group	
	ADRRID	III
	IMDG-Code	III
	ICAO-TI	III
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 i	nstruments
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulat	tions
	Transport of dangerous goods by road, rail an information	d inland waterway (ADR/RID/ADN) - Additional
	Proper shipping name	CHLOROPHENOLS, LIQUID
	Particulars in the transport document	UN2021, CHLOROPHENOLS, LIQUID, 6.1, III, (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)	E1
	Limited quantities (LQ)	5 L
	Transport category (TC)	2
	Tunnel restriction code (TRC)	E
	Hazard identification No	60
	Emergency Action Code	2X
	Regulations concerning the International Car information	riage 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)	E1

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Limited quantities (LQ)	5 L
Transport category (TC)	2
Hazard identification No	60
International Maritime Dangerous Goods C	ode (IMDG) - Additional information
Proper shipping name	CHLOROPHENOLS, LIQUID
Particulars in the shipper's declaration	UN2021, CHLOROPHENOLS, LIQUID, 6.1, III, 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)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-A
Stowage category	Α
International Civil Aviation Organization (I	CAO-IATA/DGR) - Additional information
Proper shipping name	Chlorophenols, liquid
Particulars in the shipper's declaration	UN2021, Chlorophenols, liquid, 6.1, III
Environmental hazards	<b>Yes</b> (hazardous to the aquatic environment)
Danger label(s)	6.1
Excepted quantities (EQ)	E1
Limited quantities (LQ)	2 L

### **SECTION 15: Regulatory information**

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

Seveso Directive

2012/18/EU (Seveso III)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the ap- plication of lower and upper-tier re- quirements		Notes
E2	environmental hazards (hazardous to the aquatic en- vironment, cat. 2)	200	500	57)

Notation

57) Hazardous to the Aquatic Environment in category Chronic 2

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#### **Deco-Paint Directive**

VOC content	100 % 1.248 <sup>g</sup> / <sub>l</sub>
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#### **Industrial Emissions Directive (IED)**

VOC content	100 %
VOC content	1.248 <sup>g</sup> / <sub>l</sub>

# 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
2-Chlorophenol	Organohalogen compounds and substances which may form such compounds in the aquatic envir- onment		a)	
2-Chlorophenol	Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the aquatic environment		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

#### 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

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Restrictions according to GB REACH, Annex 17			
Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
2-Chlorophenol	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
TCCA	Tavis Substance Control Act

TSCA Toxic Substance Control Act

#### 15.2 Chemical Safety Assessment

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

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### **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: Skin corrosion produces an irreversible dam- age to the skin; namely, visible necrosis through the epidermis and into the dermis. 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: This material is combustible, but will not ignite readily.	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)
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
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule

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Abbr.	Descriptions of used abbreviations
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
ΙΑΤΑ	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
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
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
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H411	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.