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



date of compilation: 2016-04-25

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#### Sodium chlorate ≥ 98%, pure

article number: **8572** Version: **3.0 en** Replaces version of: 2017-10-26 Version: (2)

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

1.1 Product identifier

Identification of the substance	<b>Sodium chlorate</b> ≥ 98%, pure
Article number	8572
Registration number (REACH)	01-2119474389-23-xxxx
Index number in CLP Annex VI	017-005-00-9
EC number	231-887-4
CAS number	7775-09-9

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

Relevant identified uses:

Laboratory chemical Laboratory and analytical use

Uses advised against:

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

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



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## Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.14	Oxidising solid	1	Ox. Sol. 1	H271
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
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

Spillage and fire water can cause pollution of watercourses.

#### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word Danger

**Pictograms** 



#### **Hazard statements**

H271	May cause fire or explosion; strong oxidiser
H302	Harmful if swallowed
H411	Toxic to aquatic life with long lasting effects

#### **Precautionary statements**

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

P210	Keep away from heat, sparks, open flames, hot surfaces. No smoking
P220	Keep away from clothing and other combustible materials
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment

#### Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger



H271	May cause fire or explosion; strong oxidiser.
P210	Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P220	Keep/store away from clothing/combustible materials.

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



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#### 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.

## **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

Name of substance	Sodium chlorate
Molecular formula	NaClO <sub>3</sub>
Molar mass	106,4 <sup>g</sup> / <sub>mol</sub>
REACH Reg. No	01-2119474389-23-xxxx
CAS No	7775-09-9
EC No	231-887-4
Index No	017-005-00-9

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

## **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures



#### **General notes**

Take off contaminated clothing.

#### **Following inhalation**

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

#### Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

#### 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 with water (only if the person is conscious). Call a doctor.

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

Vomiting, Nausea

**4.3 Indication of any immediate medical attention and special treatment needed** none

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



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## SECTION 5: Firefighting measures

#### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

#### Unsuitable extinguishing media

water jet

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

Non-combustible. Oxidising property.

#### Hazardous combustion products

In case of fire may be liberated: 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.

## **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Do not breathe dust. Avoid contact with skin, eyes and clothes.

#### 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. Take up mechanically.

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

Take up mechanically. Control of dust.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

#### 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

When not in use, keep containers tightly closed.

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

Keep away from combustible material.

#### 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

Store in a dry place. Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage. Keep/store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles.

#### Consideration of other advice:

#### 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 DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	5 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	3,08 mg/kg bw/ day	human, dermal	worker (industry)	chronic - systemic effects

#### **Environmental values**

Relevant	Relevant PNECs and other threshold levels				
End- point	Threshold level	Organism	Environmental com- partment	Exposure time	
PNEC	1 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	freshwater	short-term (single instance)	
PNEC	1 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	marine water	short-term (single instance)	



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Relevant PNECs and other threshold levels				
End- point	Threshold level	Organism	Environmental com- partment	Exposure time
PNEC	100 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	3,33 <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. 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 consider-able 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

NBR (Nitrile rubber)

#### • material thickness

>0,11 mm

#### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### • other protection measures

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

#### **Respiratory protection**



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

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#### 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	solid
Form	crystalline
Colour	whitish
Odour	odourless
Melting point/freezing point	255 – 259 °C
Boiling point or initial boiling point and boiling range	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	>250 °C
pH (value)	7,9 (in aqueous solution: 10 <sup>g</sup> / <sub>l</sub> , 20 °C)
Kinematic viscosity	not relevant
Solubility(ies)	
Water solubility	>695 <sup>g</sup> / <sub>l</sub> at 20 °C 717 <sup>g</sup> / <sub>l</sub> at 20 °C (ECHA)
Partition coefficient	
Partition coefficient n-octanol/water (log value):	<-2,9 (20 °C) (ECHA) not relevant (inorganic)
Soil organic carbon/water (log KOC)	1,503 (ECHA)
Son organic carbon/water (log KOC)	
Vapour pressure	<0 hPa at 25 °C
Density	2,54 <sup>g</sup> / <sub>cm³</sub> at 20 °C
Deutiele abeue stevistion	
Particle characteristics	No data available.
Other safety parameters	

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Oxidising properties

#### 9.2 Other information

Information with regard to physical hazard classes:

Other safety characteristics:

There is no additional information.

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

It's a reactive substance. Oxidising property.

#### 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:** Combustible materials, Ammonium compounds, Organic substances, Reducing agents, Sulphur, Metal powder, Magnesium

#### 10.4 Conditions to avoid

Keep away from heat. No smoking. Decompostion takes place from temperatures above: >250 °C.

#### **10.5 Incompatible materials** Rubber articles

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## **SECTION 11: Toxicological information**

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

Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Harmful if swallowed.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	>5.000 <sup>mg</sup> / <sub>kg</sub>	rat		ECHA
dermal	LD50	>2.000 <sup>mg</sup> / <sub>kg</sub>	rabbit		ECHA

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### 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.



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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

vomiting, nausea

#### • If in eyes

Data are not available.

#### If inhaled

Data are not available.

#### • If on skin

Frequently or prolonged contact with skin may cause dermal irritation

#### Other information

none

# **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.

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	>1.000 <sup>mg</sup> / <sub>l</sub>	fish	ECHA	96 h
EC50	>1.000 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	ECHA	48 h
ErC50	1,9 <sup>mg</sup> / <sub>l</sub>	algae	ECHA	72 h

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Aquatic toxicity (ch	ronic)			
Endpoint	Value	Species	Source	Exposure time
EC50	>1.000 <sup>mg</sup> / <sub>l</sub>	microorganisms	ECHA	3 h

#### **Biodegradation**

The methods for determining the biological degradability are not applicable to inorganic substances.

#### 12.2 Process of degradability

Process of degradability			
Process	Degradation rate	Time	
carbon dioxide generation	1 %	28 d	

#### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	<-2,9 (20 °C) (ECHA)
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#### 12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient	1,503 (ECHA)
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## **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).

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#### 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	
	ADR/RID/ADN	UN 1495
	IMDG-Code	UN 1495
	ICAO-TI	UN 1495
14.2	UN proper shipping name	
	ADR/RID/ADN	SODIUM CHLORATE
	IMDG-Code	SODIUM CHLORATE
	ICAO-TI	Sodium chlorate
14.3	Transport hazard class(es)	
	ADR/RID/ADN	5.1
	IMDG-Code	5.1
	ICAO-TI	5.1
14.4	Packing group	
	ADR/RID/ADN	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	SODIUM CHLORATE
Particulars in the transport document	UN1495, SODIUM CHLORATE, 5.1, II, (E), environ- mentally hazardous
Classification code	02
Danger label(s)	5.1, "Fish and tree"
Environmental hazards	<b>Yes</b> (hazardous to the aquatic environment)
Excepted quantities (EQ)	E2

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Limited quantities (LQ)	1 kg
Transport category (TC)	2
Tunnel restriction code (TRC)	E
Hazard identification No	50
Emergency Action Code	1Y
International Maritime Dangerous Goods	Code (IMDG) - Additional information
Proper shipping name	SODIUM CHLORATE
Particulars in the shipper's declaration	UN1495, SODIUM CHLORATE, 5.1, II, MARIN POLLUTANT
Marine pollutant	<b>yes</b> (hazardous to the aquatic environment)
Danger label(s)	5.1, "Fish and tree"
Special provisions (SP)	-
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 kg
EmS	F-H, S-Q
Stowage category	A
Segregation group	4 - Chlorates
International Civil Aviation Organization (	ICAO-IATA/DGR) - Additional information
Proper shipping name	Sodium chlorate
Particulars in the shipper's declaration	UN1495, Sodium chlorate, 5.1, II
Environmental hazards	<b>YES</b> (hazardous to the aquatic environment)
Danger label(s)	5.1
Excepted quantities (EQ)	E2
Limited quantities (LQ)	2,5 kg

## **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)

Restrictions according to REACH, Annex XVII

not listed

**List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list** Not listed.

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Seveso Directive					
2012/18/EU (Seveso III)					
No	Dangerous substance/hazard categories		y (tonnes) for the ap- r and upper-tier re- ements	Notes	
P8	oxidising liquids and solids	50	200	55)	

#### Notation

55) Oxidising liquids, category 1, 2 or 3, or oxidising solids, category 1, 2 or 3

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

, 0 9/1
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#### **Industrial Emissions Directive (IED)**

VOC content	0 %
VOC content	0 g/l

# 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
Sodium chlorate	Metals and their compounds		A)	

Legend A)

Indicative list of the main pollutants

#### Regulation on the marketing and use of explosives precursors

Explosives precursors which are subject to restrictions					
Name of substance	CAS No	Type of registration	Remarks	Limit value	Upper limit value for the pur- pose of licensing under Article 5(3)
Sodium chlorate	7775-09-9	Annex I		40 % w/w	No licens- ing permit- ted

Legend annex I

Substances which shall not be made available to members of the general public on their own, or in mixtures or substances including them, except if the concentration is equal to or lower than the limit values set out below

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#### **Additional statements**

If the product is passed on to third parties, in accordance with Article 7 "Notification of the supply chain" of Regulation EU 2019/1148, the information obligation is subject to the entire supply chain and all other provisions mentioned in Article 7 on restricted and regulated raw materials.

#### **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)

chemicals subject to the international prior informed consent (PIC) procedure (the 'PIC procedure').

Name of substance	Name acc. to inventory	CAS No	Category / subcategory	Use limita- tion
Sodium chlorate	chlorate	7775-09-9	p(1)	b
Sodium chlorate	chlorate	7775-09-9	р	b

Legend

b р

p(1)

Use limitation: ban (for the sub-category or sub-categories concerned) according to Union legislation Category: p - pesticides

Sub-category: p(1) - pesticide in the group of plant protection products

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

not listed

#### 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	AICS	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
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed

Legend

AICS Australian Inventory of Chemical Substances CICR Chemical Inventory and Control Regulation CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)



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TCSI	Domestic Substances List (DSL) EC Substance Inventory (EINECS, ELINCS, NLP) Inventory of Existing Chemical Substances Produced or Imported in China National Inventory of Chemical Substances Korea Existing Chemicals Inventory New Zealand Inventory of Chemicals Philippine Inventory of Chemicals and Chemical Substances (PICCS) REACH registered substances Taiwan Chemical Substance Inventory
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

#### 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: Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

#### Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.1		Classification according to Regulation (EC) No 1272/2008 (CLP): change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Spillage and fire water can cause pollution of watercourses.	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2	Precautionary statements - response		yes
2.2		Precautionary statements - response: 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)

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Abbr.	Descriptions of used abbreviations
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
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
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
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
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
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
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)
SVHC	Substance of Very High Concern
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

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#### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

#### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H271	May cause fire or explosion; strong oxidiser.
H302	Harmful if swallowed.
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.