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Sodium persulfate ≥ 99%

article number: **4365** Version: **GHS 4.0 en** Replaces version of: 2022-07-08 Version: (GHS 3)

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

1.1 Product identifier

Identification of the substance

Article number

CAS number

Alternative name(s)

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

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

Disodium peroxodisulphate

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7775-27-1

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feedingstuffs.

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
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 West- mead, NSW	131126	

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
2.14	Oxidising solid	3	Ox. Sol. 3	H272
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315

date of compilation: 2016-07-05 Revision: 2024-03-02



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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.3	Serious eye damage/eye irritation	2A	Eye Irrit. 2A	H319
3.4R	Respiratory sensitisation	1	Resp. Sens. 1	H334
3.4S	Skin sensitisation	1	Skin Sens. 1	H317
3.8R	Specific target organ toxicity - single exposure (respirat- ory tract irritation)	3	STOT SE 3	H335

For full text of abbreviations: see SECTION 16

2.2 Label elements

Labelling

Signal word Danger

Pictograms



Hazard statements

H272	May intensify fire; oxidiser
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation

Precautionary statements

Precautionary statements - prevention

P210	Keep away from heat/sparks/open flames/hot surfaces No smoking
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P280	Wear protective gloves

Precautionary statements - response

P302+P352	IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
	lenses, if present and easy to do. Continue rinsing
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher for extinction

Precautionary statements - storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed

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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.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\ge 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substanceSodium persulfateMolecular formulaNa2S2O8Molar mass238.1 g/molCAS No7775-27-1

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Remove person to fresh air and keep comfortable for breathing. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately.

Following skin contact

Rinse skin with water/shower. In case of skin reactions, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

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

4.2 Most important symptoms and effects, both acute and delayed

Irritation, Cough, Breathing difficulties, Headache, Allergic reactions, Nausea, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

Following inhalation: Glucocorticoids in a metered-dose inhaler (in case of poisoning with nitrous gases). Treat symptomatically.



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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

Oxidising property. Non-combustible.

Hazardous combustion products

In case of fire may be liberated: Sulphur oxides (SOx)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. 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

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

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

Precautions for safe handling 7.1

Provision of sufficient ventilation. Avoid dust formation.

Measures to prevent fire as well as aerosol and dust generation

Removal of dust deposits. Keep away from combustible material.

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.

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:

Ventilation requirements

Use local and general ventilation.

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)

Coun try	Name of agent	CAS No	Identifi- er	TWA [mg/ m³]	STEL [mg/ m³]	Ceil- ing-C [mg/ m ³]	Nota- tion	Source
AU	nuisance dusts		WES	10			i	WES
AU	sodium persulfate	7775-27-1	WES			0.01		WES

Notation

Ceiling value is a limit value above which exposure should not occur Inhalable fraction Ceiling-C

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15minute period (unless otherwise specified)

Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 TWA hours time-weighted average (unless otherwise specified)

Human health values



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Relevant DNELs and other threshold levels						
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time		
DNEL	2.06 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects		
DNEL	590 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects		
DNEL	400 mg/kg bw/ day	human, dermal	worker (industry)	acute - systemic effects		
DNEL	0.824 mg/m³	human, inhalatory	worker (industry)	chronic - local effects		
DNEL	12.7 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	0.763 ^{mg} / _l	aquatic organisms	water	intermittent release			
PNEC	0.518 ^{mg} / _l	aquatic organisms	freshwater	short-term (single instance)			
PNEC	0.052 ^{mg} / _l	aquatic organisms	marine water	short-term (single instance)			
PNEC	3.6 ^{mg} / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)			
PNEC	2.03 ^{mg} / _{kg}	aquatic organisms	freshwater sediment	short-term (single instance)			
PNEC	0.203 ^{mg} / _{kg}	aquatic organisms	marine sediment	short-term (single instance)			
PNEC	0.1 ^{mg} / _{kg}	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



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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

>0,3 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).

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	white
Odour	odourless
Melting point/freezing point	148 °C (slow decomposition)
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	180 °C at 101.1 kPa (ECHA)

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	pH (value)	3.5 – 3.8 (in aqueous solution: 100 ^g / _l , 20 °C)
	Kinematic viscosity	not relevant
	Solubility(ies)	
	Water solubility	~ 730 ^g / _l at 25 °C (ECHA)
	Partition coefficient	
	Partition coefficient n-octanol/water (log value):	not relevant (inorganic)
	Vapour pressure	0 mmHg at 25 °C
	Density and/or relative density	
	Density	~ 1.7 ^g / _{cm³} at 20 °C
	Relative vapour density	2 (air = 1)
	Bulk density	~ 1,150 ^{kg} / _{m³}
	Particle characteristics	No data available.
	Other safety parameters	
	Oxidising properties	oxidiser
9.2	Other information	
	Information with regard to physical hazard classes:	There is no additional information.
	Other safety characteristics:	There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

It's a reactive substance. Oxidising property.

10.2 Chemical stability

May cause decomposition by long-term light influence. Hygroscopic solid.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong alkali, Strong acid, Combustible materials, **Danger of explosion:** Reducing agents

10.4 Conditions to avoid

Keep away from heat. Decompositon takes place from temperatures above: 180 °C at 101.1 kPa.

10.5 Incompatible materials combustible materials

10.6 Hazardous decomposition products Hazardous combustion products: see section 5.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4. May be harmful in contact with skin or if inhaled.

Acute toxicity						
Exposure route	Endpoint	Value	Species	Method	Source	
oral	LD50	1,200 ^{mg} / _{kg}	rat		ECHA	
inhalation: dust/ mist	LC50	>5.1 ^{mg} / _l /4h	rat		ECHA	
dermal	LD50	>2,000 ^{mg} / _{kg}	rat		ECHA	

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

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

May cause respiratory irritation.

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, gastrointestinal complaints

• If in eyes

Causes serious eye irritation

If inhaled

Irritation to respiratory tract, May produce an allergic reaction, cough, Dyspnoea



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• If on skin

causes skin irritation, May produce an allergic reaction, pruritis, localised redness

• Other information

Other adverse effects, Headache, Nausea

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\ge 0,1\%$.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life.

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	76.3 ^{mg} / _l	fish	ECHA	96 h
EC50	120 ^{mg} / _l	aquatic invertebrates	ECHA	48 h

Aquatic toxicity (chronic)

Endpoint	Value	Species	Source	Exposure time
LC50	203.3 ^{mg} / _l	fish	ECHA	24 h
EC50	11 ^{mg} / _l	aquatic invertebrates	ECHA	5 d

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment Data are not available.

12.6 Endocrine disrupting properties Does not contain an endocrine disruptor (ED) at a concentration of $\ge 0,1\%$.

12.7 Other adverse effects

Data are not available.

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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.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H11 Toxic (Delayed or chronic)

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. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

	UN RTDG	UN 1505
	IMDG-Code	UN 1505
	ICAO-TI	UN 1505
14.2	UN proper shipping name	
	UN RTDG	SODIUM PERSULPHATE
	IMDG-Code	SODIUM PERSULPHATE
	ICAO-TI	Sodium persulphate
14.3	Transport hazard class(es)	
	UN RTDG	5.1
	IMDG-Code	5.1
	ICAO-TI	5.1
14.4	Packing group	
	UN RTDG	III
	IMDG-Code	III
	ICAO-TI	III

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14.5	Environmental hazards	non-environmentally hazardous acc. to the dan- gerous goods regulations
14.6	Special precautions for user	
	There is no additional information.	
14.7	Transport in bulk according to IMO instruments	i
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulation	ons
	Transport informationNational regulationsAddi	tional information(UN RTDG)
	UN number	1505
	Class	5.1
	Packing group	III
	Danger label(s)	5.1
	51	
	Special provisions (SP)	- UN RTDG
	Excepted quantities (EQ)	E1 UN RTDG
	Limited quantities (LQ)	5 kg UN RTDG
	Emergency Action Code	1Z
	International Maritime Dangerous Goods Code	(IMDG) - Additional information
	Proper shipping name	SODIUM PERSULPHATE
	Particulars in the shipper's declaration	UN1505, SODIUM PERSULPHATE, 5.1, III
	Marine pollutant	-
	Danger label(s)	5.1
	Special provisions (SP)	-
	Excepted quantities (EQ)	E1
	Limited quantities (LQ)	5 kg
	EmS	F-A, S-Q
	Stowage category	A

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International Civil Aviation Organization (IC	CAO-IATA/DGR) - Additional information
Proper shipping name	Sodium persulphate
Particulars in the shipper's declaration	UN1505, Sodium persulphate, 5.1, III
Danger label(s)	5.1
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 kg

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1 There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

Substance is 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	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
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

Legend AIIČ

CICR

DSL ECSI IECSC

CSCL-ENCS

Australian Inventory of Industrial Chemicals Chemical Inventory and Control Regulation List of Existing and New Chemical Substances (CSCL-ENCS) Domestic Substances List (DSL) EC Substance Inventory (EINECS, ELINCS, NLP) Inventory of Existing Chemical Substances Produced or Imported in China

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Legend	
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REAĊH registered substances
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)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
14.8		Emergency Action Code: 1Z	yes
15.1		National inventories: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
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
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
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



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Abbr.	Descriptions of used abbreviations
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
STEL	Short-term exposure limit
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. 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
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

Disclaimer

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