Safety Data Sheet

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

Sodium sulphate

Version number: 7.0
Replaces version of: 2019-02-01 (6)

Revision: 2020-03-03
First version: 07.04.2006

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

1.1 Product identifier

Trade name	**Sodium sulphate**
Registration number (REACH)	01-2119519226-43-XXXX
EC number	231-820-9
CAS number	7757-82-6

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

Relevant identified uses	Industrial use
Uses advised against	Do not use for private purposes (household)

1.3 Details of the supplier of the safety data sheet

BERGCHEMIE J.C.Bröcking & Co. GmbH
Rudolfstrasse 14
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Germany

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Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact BERGCHEMIE J.C.Bröcking & Co. GmbH.

1.4 Emergency telephone number

As above or nearest toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

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

Not required.

2.3 Other hazards

There is no additional information.

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 sulphate
Identifiers	
CAS No	7757-82-6
EC No	231-820-9
Molecular formula	Na2 SO4
Molar mass	142 $^{g}/_{mol}$

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

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

Following inhalation

Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

Gastrointestinal complaints.
Nausea.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water, foam, alcohol resistant foam, fire extinguishing powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

sulphur oxides (SOx)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

use suitable breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ventilate affected area.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

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

Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.
Collect spillage.

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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.
Do not breathe dust.
Avoid contact with eyes.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Not dust explosion capable.

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat, humidity, sunlight

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
GB	dust		WEL		10			i	EH40/2005
GB	dust		WEL		4			r	EH40/2005

Notation

i	inhalable fraction
r	respirable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Human health values

Relevant DNELs and other threshold levels

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	20 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	20 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
DNEL	12 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
DNEL	12 mg/m³	human, inhalatory	consumer (private households)	chronic - local effects

Environmental values

Relevant PNECs and other threshold levels

Endpoint	Threshold level	Environmental compartment
PNEC	11.09 $^{mg}/_{l}$	freshwater
PNEC	1.109 $^{mg}/_{l}$	marine water
PNEC	800 $^{mg}/_{l}$	sewage treatment plant (STP)

Relevant PNECs and other threshold levels		
Endpoint	**Threshold level**	**Environmental compartment**
PNEC	40.2 $^{mg}/_{kg}$	freshwater sediment
PNEC	4.02 $^{mg}/_{kg}$	marine sediment
PNEC	1.54 $^{mg}/_{kg}$	soil

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	**Material thickness**	**Breakthrough times of the glove material**
NR: natural rubber, latex	≥ 0,65 mm	>480 minutes (permeation: level 6)
CR: chloroprene (chlorobutadiene) rubber	≥ 0,65 mm	>480 minutes (permeation: level 6)
NBR: acrylonitrile-butadiene rubber	≥ 0,11 mm	>480 minutes (permeation: level 6)

Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
In the case of wanting to use the gloves again, clean them before taking off and air them well.
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.

Respiratory protection

Particulate filter device (EN 143).
P1 (filters at least 80 % of airborne particles, colour code: White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid
Form	powder, crystalline
Colour	white
Odour	odourless
Odour threshold	these information are not available

Other safety parameters

pH (value)	5.2 – 8 (water: 50 $^{g}/_{l}$, 20 °C)
Melting point/freezing point	888 °C
Initial boiling point and boiling range	these information are not available
Flash point	not applicable
Evaporation rate	these information are not available
Flammability (solid, gas)	non-combustible
Explosion limits of dust clouds	not determined
Vapour pressure	these information are not available
Density	2.7 $^{g}/_{cm^3}$ at 20 °C
Vapour density	these information are not available
Bulk density	1,400 – 1,600 $^{kg}/_{m^3}$
Relative density	these information are not available
Solubility(ies)	
Water solubility	200 $^{g}/_{l}$ at 20 °C 410 $^{g}/_{l}$ at 30 °C
Partition coefficient	
n-octanol/water (log KOW)	-4.38
Auto-ignition temperature	not relevant (Solid matter)
Relative self-ignition temperature for solids	these information are not available
Decomposition temperature	>884 °C (ECHA)

Viscosity	
Kinematic viscosity	not relevant (solid matter)
Dynamic viscosity	not relevant (solid matter)
Explosive properties	not explosive
Oxidising properties	shall not be classified as oxidising

9.2 Other information

Surface tension	71 $^{mN}/_{m}$ (20 °C) (EU method A.5) (ECHA)

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

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

Explosive reaction with Aluminium.

10.4 Conditions to avoid

Keep away from heat.
Humidity.

10.5 Incompatible materials

aluminium

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgement (weight of evidence determination).

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

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

Shall not be classified as acutely toxic (oral).

Acute toxicity

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	>2,000 $^{mg}/_{kg}$	rat, female	OECD Guideline 423	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

Skin sensitisation
Shall not be classified as a skin sensitiser.

Respiratory sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Based on available data, the classification criteria are not met.

Aquatic toxicity (acute)

Endpoint	Value	Species	Method	Source	Exposure time
LC50	7,960 mg/l	fathead minnow (pimephales promelas)		ECHA	96 h
LC50	1,766 mg/l	daphnia magna	EPA 600/R-94/024	ECHA	48 h

Aquatic toxicity (chronic)

Based on available data, the classification criteria are not met.

Aquatic toxicity (chronic)

Endpoint	Value	Species	Method	Source	Exposure time
LC50	3,030 mg/l	Ceriodaphnia dubia (water flea)	ASTM E 1295-01	ECHA	7 d
EC50	1,698 mg/l	Ceriodaphnia dubia (water flea)	ASTM E 1295-01	ECHA	7 d
EC50	1,900 mg/l	algae		ECHA	120 h
LOEC	1,329 mg/l	Ceriodaphnia dubia (water flea)	ASTM E 1295-01	ECHA	7 d
NOEC	8 g/l	microorganisms		ECHA	37 d

12.2 Persistence and degradability

Biodegradation

The study does not need to be conducted because the substance is inorganic.

Persistence

The study does not need to be conducted because the substance is inorganic.

12.2.4 BOD5/COD CSB/COD: max. 3 mg/g

12.3 Bioaccumulative potential

n-octanol/water (log KOW) -4.38
(ECHA)

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	**UN number**	not subject to transport regulations
14.2	**UN proper shipping name**	-
14.3	**Transport hazard class(es)**	-
14.4	**Packing group**	-
14.5	**Environmental hazards**	-
14.6	**Special precautions for user**	-
14.7	**Transport in bulk according to Annex II of MARPOL and the IBC Code**	-

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.

Seveso Directive

Not assigned.

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

Not listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Not listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

Not listed.

Regulation 98/2013/EU on the marketing and use of explosives precursors

Not listed.

Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)

Not listed.

Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)

Not listed.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Indication of changes: Section 9, 10

Abbreviations and acronyms

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
BOD	Biochemical Oxygen Demand
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
COD	Chemical oxygen demand

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
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 identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	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
LOEC	Lowest Observed Effect Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

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 2015/830/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).

Responsible for the safety data sheet

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