



Safety Data Sheet

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

Ammoniumsulfat

Version number: 4.0
Replaces version of: 2013-04-17 (3)

Revision: 2016-02-26
First version: 20.03.2006

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

1.1 Product identifier

Trade name	<u>Ammoniumsulfat</u>
Registration number (REACH)	01-2119455044-46-XXXX
EC number	231-984-1
CAS number	7783-20-2

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

Relevant identified uses	Chemicals for various applications Process agent use
---------------------------------	---

1.3 Details of the supplier of the safety data sheet

BERGCHEMIE J.C.Bröcking & Co. GmbH Rudolfstrasse 14 42285 Wuppertal Germany	Telephone: ++49 (0) 202 - 45 60 60 Telefax: ++49 (0) 202 / 44 79 32
--	--

E-mail address of competent person responsible for the SDS	sdb@csb-online.de
---	-------------------

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 next 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.

Additional information

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

Ammoniumsulfat

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	Ammonium sulphate
Identifiers	
CAS No	7783-20-2
EC No	231-984-1
Molecular formula	H ₃ N ₁ /2H ₂ O ₄ S
Molar mass	132.1 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.

Ammoniumsulfat

Notes for the doctor

none

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

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, fire extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

ammonia (NH₃), nitrogen oxides (NO_x), sulphur oxides (SO_x)

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

self-contained breathing apparatus (EN 133)

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.

Ammoniumsulfat

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

take up mechanically

Advices 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 to 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 skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Removal of dust deposits.

Ammoniumsulfat

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat, humidity

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Storage temperature <25 °C

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

No data available.

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Source
GB	dust		i	WEL		10			EH40/2005
GB	dust		r	WEL		4			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

Human health values

Ammoniumsulfat

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	42.67 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
DNEL	11.17 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	6.4 mg/kg	human, oral	consumer (private households)	chronic - systemic effects
DNEL	12.8 mg/kg	human, dermal	consumer (private households)	chronic - systemic effects
DNEL	1.667 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects

Environmental values

Relevant PNECs and other threshold levels			
Endpoint	Threshold level	Environmental compartment	Exposure time
PNEC	0.312 mg/l	freshwater	short-term (single instance)
PNEC	0.0312 mg/l	marine water	short-term (single instance)
PNEC	16.18 mg/l	sewage treatment plant (STP)	short-term (single instance)
PNEC	0.063 mg/kg	freshwater sediment	short-term (single instance)
PNEC	62.6 mg/kg	soil	short-term (single instance)
PNEC	0.53 mg/l	water	continuous

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Material	Material thickness	Breakthrough times of the glove material
NR: natural rubber, latex	these information are not available	these information are not available
IIR: isobutene-isoprene (butyl) rubber	these information are not available	these information are not available

Ammoniumsulfat

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

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

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	crystalline
Colour	white
Odour	odourless
Odour threshold	these information are not available

Other safety parameters

pH (value)	5 - 6 (water: 50 g/l, 20 °C)
Melting point/freezing point	350 °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-flammable
Explosion limits of dust clouds	not determined
Vapour pressure	these information are not available
Density	1.77 g/cm ³ at 20 °C
Vapour density	these information are not available
Bulk density	1 - 1.2 g/cm ³
Relative density	these information are not available

Ammoniumsulfat

Solubility(ies)

Water solubility	766 g/l at 25 °C
Partition coefficient	
n-octanol/water (log KOW)	these information are not available
Auto-ignition temperature	these information are not available
Decomposition temperature	235 °C
Viscosity	not relevant
Kinematic viscosity	these information are not available
Dynamic viscosity	these information are not available
Explosive properties	not explosive
Oxidising properties	shall not be classified as oxidising

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

Dangerous/dangerous reactions with.
Alkalis.

10.4 Conditions to avoid

Protect from moisture.

10.5 Incompatible materials

bases, oxidisers, alkaline earth metal

Release of toxic materials with:

bases

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.

Ammoniumsulfat

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	4,250 mg/kg	rat		European Chemicals Agency, http://echa.europa.eu/

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.

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.

Ammoniumsulfat

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	53 mg/l	rainbow trout (Oncorhynchus mykiss)		European Chemicals Agency, http://echa.europa.eu/	96 hours
EC50	121.7 mg/l	aquatic invertebrates		European Chemicals Agency, http://echa.europa.eu/	48 hours

Aquatic toxicity (chronic)

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

Aquatic toxicity (chronic)					
Endpoint	Value	Species	Method	Source	Exposure time
EC50	2,700 mg/l	algae		European Chemicals Agency, http://echa.europa.eu/	18 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.

12.3 Bioaccumulative potential

Data are not available.

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.

Ammoniumsulfat

12.6 Other adverse effects

Data are not available.

Endocrine disrupting potential

Not listed.

Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

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) | |
| | Class | - |
| 14.4 | Packing group | - |
| 14.5 | Environmental hazards | - |
| 14.6 | Special precautions for user | |
| | | There is no additional information. |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | |
| | | The cargo is not intended to be carried in bulk. |

Ammoniumsulfat

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)

not listed

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

Explosives precursors which are subject to restrictions

not listed

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Indication of changes: Section -

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)
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	danger
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)

Ammoniumsulfat

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
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
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

C.S.B. GmbH

Düsseldorfer Str. 113

47809 Krefeld

Telephone: ++49 (0) 2151 - 652086 - 0

Telefax: ++49 (0) 2151 - 652086 - 9

E-mail: info@csb-online.de

Website: www.csb-online.de

Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.