

**Safety data sheet
according to 1907/2006/EC, Article 31**

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name: Ammonium sulphate****Article number:** 2616**CAS Number:**

7783-20-2

EC number:

231-984-1

Registration number 01-2119455044-46-XXXX**1.2 Relevant identified uses of the substance or mixture and uses advised against****Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU24 Scientific research and development

Product category

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC29 Pharmaceuticals

PC39 Cosmetics, personal care products

PC40 Extraction agents

Process category

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC15 Use as laboratory reagent

Environmental release category

ERC1 Manufacture of the substance

ERC2 Formulation into mixture

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC6a Use of intermediate

Application of the substance / the mixture

Laboratory chemicals

Reagent for analysis

Industrial use

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Th. Geyer GmbH & Co. KG

Dornierstr. 4 – 6

D-71272 Renningen

Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417

www.thgeyer.de

sicherheitsdatenblaetter@thgeyer.de

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 1)

- **Further information obtainable from:** Product management department
- **1.4 Emergency telephone number:**
National Poisons Information Service
City Hospital
Dudley Road
Birmingham B18 7QH
Tel.:Emergency: (00 44) 87 06 00 62 66
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The substance is not classified, according to the GB CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
CAS: 7783-20-2 ammonium sulphate
- **Identification number(s)**
- **EC number:** 231-984-1

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
First aider needs to protect himself.
Immediately remove any clothing soiled by the product.
No special measures required.
- **After inhalation:**
Supply fresh air.
Seek medical treatment in case of complaints.
- **After skin contact:** Flush contaminated skijn with soap and plenty of water.
- **After eye contact:**
Rinse out opened eye for several minutes under running water.
Remove any contact lenses if possible.
Continue rinsing.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Consult a doctor if you feel unwell.
- **Information for doctor:** Please observe safety data sheet/label.

(Contd. on page 3)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 2)

- **4.2 Most important symptoms and effects, both acute and delayed**
Gastric or intestinal disorders
Nausea
- **4.3 Indication of any immediate medical attention and special treatment needed**
Give Glucocorticoid-Aerosol in case of lung irritation.
Symptomatic treatment.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Sulfur oxides
Nitrogen oxides (NO_x)
Not combustible.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation.
Avoid formation of dust.
Do not inhale dust.
Avoid contact with eyes and skin.
- **6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Cover drains.
Avoid dust formation.
Ensure adequate ventilation.
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Apply the general protection and hygiene measures for the handling with chemicals.
No special measures required.
- **Information about fire - and explosion protection:**
Substance itself does not burn, tuning measures to environment

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 3)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**
 - Store away from oxidising agents.
 - Store away from water.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store in dry conditions.
- **Storage class:** 13
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
 - NBR: acrylonitrile-butadiene rubber
 - Material thickness > 0.11 mm
- **Penetration time of glove material**
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - level 6 for application > 480 min
- **Eye/face protection**



Tightly sealed goggles

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 4)

· Body protection:

Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties**· General Information****· Physical state**

Solid

· Colour:

Colourless

· Odour:

Characteristic

· Melting point/freezing point:

235 °C

· Boiling point or initial boiling point and boiling range

Undetermined.

· Flammability

Product is not flammable.

· Lower and upper explosion limit**· Lower:**

Not determined.

· Upper:

Not determined.

· Flash point:

Not applicable.

· Decomposition temperature:

Not determined.

· pH

Not applicable.

· Viscosity:**· Kinematic viscosity**

Not applicable.

· Kinematic viscosity**· Dynamic:**

Not applicable.

· Solubility**· water at 20 °C:**

760 g/l

· Partition coefficient n-octanol/water (log value)

Not determined.

· Vapour pressure:

Not applicable.

· Vapour pressure:**· Density and/or relative density****· Density at 20 °C:**1.77 g/cm³

Not determined.

· Relative density

Not determined.

· Bulk density:960 kg/m³**· Vapour density**

Not applicable.

· Particle characteristics

See section 3.

· 9.2 Other information**· Appearance:****· Form:**

Solid

· Important information on protection of health and environment, and on safety.**· Ignition temperature:**

Not determined.

· Explosive properties:

Product does not present an explosion hazard.

· Molecular weight

132.14 g/mol

· Change in condition**· Evaporation rate**

Not applicable.

· Information with regard to physical hazard classes**· Explosives**

Void

· Flammable gases

Void

· Aerosols

Void

· Oxidising gases

Void

(Contd. on page 6)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 5)

· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable with proper storage and handling.
- **Thermal decomposition / conditions to be avoided:** Stable at environment temperature.
- **10.3 Possibility of hazardous reactions** Reacts with alkaline metals.
- **10.4 Conditions to avoid** Protect from humidity.
- **10.5 Incompatible materials:** Avoid contact with other chemicals.
- **10.6 Hazardous decomposition products:** On fire: see chapter 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

Oral	LD50	2,840 mg/kg (rat)
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- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 6)

- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods** Observe local (country-specific) regulations and laws
- **Recommendation**
Smaller quantities can be disposed of with household waste.
Chemicals must be disposed of in compliance with the respective national regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, ADN, IMDG, IATA	not regulated
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	not regulated
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	not regulated
· 14.4 Packing group · ADR, IMDG, IATA	not regulated
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· UN "Model Regulation":	not regulated

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Inventory of Hazardous Chemicals** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 65
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.

(Contd. on page 8)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 7)

- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.
- **National regulations:**
- **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
Application, use and handling of our products take place out of our control and are solely your responsibility.

- **Department issuing SDS:** Product management
- **Contact:** Product management
- **Version number of previous version:** 3
- **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
- *** Data compared to the previous version altered.**

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 8)

Annex: Exposure scenario

- **Short title of the exposure scenario** Chemicals for Laboratory and industrial use
- **Sector of Use**
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU9 Manufacture of fine chemicals
 - SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
 - SU24 Scientific research and development
- **Product category**
 - PC19 Intermediate
 - PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
 - PC21 Laboratory chemicals
 - PC29 Pharmaceuticals
 - PC39 Cosmetics, personal care products
 - PC40 Extraction agents
- **Process category**
 - PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
 - PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 - PROC4 Chemical production where opportunity for exposure arises
 - PROC5 Mixing or blending in batch processes
 - PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 - PROC15 Use as laboratory reagent
- **Environmental release category**
 - ERC1 Manufacture of the substance
 - ERC2 Formulation into mixture
 - ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 - ERC6a Use of intermediate
- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Solid
- **Concentration of the substance in the mixture** Raw material.
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure**
Observe section 6 of the Safety Data Sheet (Accidental release measures).
- **Other operational conditions affecting worker exposure**
Avoid contact with eyes.
Avoid contact with the skin.
- **Other operational conditions affecting consumer exposure** Not required.
- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures** Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
No special measures required.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 31.03.2023

Version number 4 (replaces version 3)

Creation Date: 18.03.2016

Trade name: Ammonium sulphate

(Contd. of page 9)

apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Do not inhale dust / smoke / mist.

· **Measures for consumer protection**

No special measures required.

Ensure adequate labelling.

· **Environmental protection measures**

· **Air** No special measures required.

· **Water** No special measures required.

· **Disposal measures** Ensure that waste is collected and contained.

· **Disposal procedures**

Dispose of product residues with household waste.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Waste type** Partially emptied and uncleaned packaging

· **Exposure estimation**

· **Consumer** Not relevant for this Exposure Scenario.

· **Guidance for downstream users** No further relevant information available.

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