

SAFETY DATA SHEET

1. Identification

Product identifier Ammonium Sulfate

Other means of identification

SDS Number KNC_(NH4)2SO4_US_EN

Synonyms GAS, Granular Ammonium Sulfate

Recommended use Fertilizer.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

Company Name Koch Nitrogen Company, LLC
 4111 E 37th Street North
 PO Box 2219
 Wichita, KS, 67201-2219
 kochmsds@kochind.com
 1-316-828-7672

Emergency For Chemical Emergency
 Call CHEMTREC day or night
 1.800.424.9300
 Mexico - 1.800.681.9531
 Outside USA/Canada
 1.703.527.3887
 (collect calls accepted)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement None.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Get medical attention/advice if you feel unwell.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) Not classified.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Ammonium sulfate	GAS, Granular Ammonium Sulfate	7783-20-2	100

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
 This Safety Data Sheet is not a guarantee of product specification or NPK value(s). NPK content is on specified sales orders, customer invoices, or product specification sheets obtained from supplier.

4. First-aid measures

Inhalation If symptomatic, move to fresh air. Get medical attention if any discomfort continues.

Skin contact Wash skin with soap and water. Should dermal irritation or dermal sensitization occur, seek medical attention.

Eye contact Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.
Most important symptoms/effects, acute and delayed May cause abdominal discomfort if swallowed.

5. Fire-fighting measures

Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Heating may cause the release of ammonia vapors. NH₃ (16-25%) may form flammable mixtures with air. If heated beyond dryness, some hydrogen sulfide gas may be given off.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Avoid inhalation of dust and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. After removal flush contaminated area thoroughly with water.

Never return spills to original containers for re-use.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

Eye/face protection Risk of contact: Wear dust goggles.

Skin protection

Hand protection Risk of contact: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.

Other No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear air supplied respiratory protection if exposure concentrations are unknown. In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134 and ANSI Z88.2.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance White. Odorless. Solid.

Physical state Solid.

Form	Crystals. Granules.
Color	White.
Odor	Odorless.
Odor threshold	Not available.
pH	5 - 6 (Concentration 5%)
Melting point/freezing point	> 455 °F (> 235 °C) (Decomposes.)
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0 kPa at 25 °C Not available.
Vapor density	> 1 (Air = 1)
Relative density	Not available.
Solubility(ies)	76g / 100 ml (20°C). Easily soluble in cold water.
Partition coefficient (n-octanol/water)	-5.1 at 25 °C
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.77 g/cm ³ estimated
Flammability	Not applicable.
Flammability (Train fire)	Not applicable.
Molecular formula	(N-H ₄) ₂ -S-O ₄
Molecular weight	132.14

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Ammonia fumes may be released upon heating.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Skin contact	May cause irritation through mechanical abrasion.
Eye contact	May cause irritation through mechanical abrasion.

Symptoms related to the physical, chemical and toxicological characteristics May cause skin irritation on prolonged or repeated contact.

Information on toxicological effects

Acute toxicity May cause discomfort if swallowed.

Product	Species	Test Results
Ammonium sulfate (CAS 7783-20-2)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 1000 mg/m3, 8 hours
<i>Oral</i>		
LD50	Rat	2840 mg/kg
Skin corrosion/irritation	May cause irritation through mechanical abrasion.	
Serious eye damage/eye irritation	May cause irritation through mechanical abrasion.	
Respiratory sensitization	No data available.	
Skin sensitization	Not a skin sensitizer.	
Germ cell mutagenicity	Based on available data the product is not mutagenic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Reproductive toxicity	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - single exposure	No data available.	
Specific target organ toxicity - repeated exposure	No data available.	
Aspiration hazard	Based on available data, the classification criteria are not met.	
Chronic effects	This product contains compounds that may release ammonia when heated. Prolonged or repeated overexposure to ammonia vapors may harm the eyes, mucous membranes, and/or upper respiratory tract.	
Further information	No other specific acute or chronic health impact noted.	

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results	
Ammonium sulfate (CAS 7783-20-2)			
Fish	LC50	Salmo gairdneri	173 mg/l, 96 hours
Aquatic			
Algae	EC50	Chlorella vulgaris	2700 mg/l, 18 days
Crustacea	EC50	Water flea (Daphnia magna)	> 100 mg/l, 96 hours
Persistence and degradability	No data available.		
Bioaccumulative potential	No data available.		
Mobility in soil	This product is water soluble and may disperse in soil.		
Other adverse effects	No data available.		

13. Disposal considerations

Disposal instructions Do not discharge into drains or the environment, please contact your local municipality / waste handler for disposal requirements.

Hazardous waste code Not regulated.

Waste from residues / unused products Dispose in accordance with all applicable regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as a dangerous good.

IMDG

Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. However, this product is a solid and transported in bulk covered under Appendix I of the IMSBC Code.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Total food additive
Direct food additive
GRAS food additive

US state regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Ammonium sulfate (CAS 7783-20-2)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Ammonium sulfate (CAS 7783-20-2)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

International Inventories

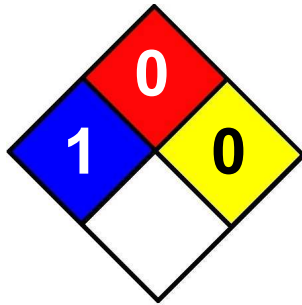
Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 08-January-2014
Revision date -
Version # 01
NFPA Ratings



References

ACGIH
EPA: Acquire database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

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