

**1. Identification**

**Product identifier** Ammonium Sulfate

**Other means of identification**

**SDS Number** KF\_(NH4)2SO4\_US\_EN

**Synonyms** GAS, Granular Ammonium Sulfate

**Recommended use** Fertilizer.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Company Name** Koch Fertilizer, 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)** None known.

**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

<b>Inhalation</b>	If symptomatic, move to fresh air. Get medical attention if any discomfort continues.
<b>Skin contact</b>	Wash skin with soap and water. Should dermal irritation or dermal sensitization occur, seek medical attention.
<b>Eye contact</b>	Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
<b>Ingestion</b>	Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.
<b>Most important symptoms/effects, acute and delayed</b>	May cause abdominal discomfort if swallowed.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Heating may cause the release of ammonia vapors. NH <sub>3</sub> (16-25%) may form flammable mixtures with air. If heated beyond dryness, some hydrogen sulfide gas may be given off.
<b>Special protective equipment and precautions for firefighters</b>	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.
<b>Fire fighting equipment/instructions</b>	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

<b>Personal precautions, protective equipment and emergency procedures</b>	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.
<b>Methods and materials for containment and cleaning up</b>	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.
<b>Environmental precautions</b>	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

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

## 8. Exposure controls/personal protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Provide adequate general and local exhaust ventilation. Observe occupational exposure limits and minimize the risk of inhalation of dust.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Risk of contact: Wear dust goggles.
<b>Skin protection</b>	
<b>Hand protection</b>	Risk of contact: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	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** Not available.

**Vapor density** > 1 (Air = 1)

**Relative density** Not available.

**Solubility(ies)**

**Solubility (water)** 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<sup>3</sup> estimated

**Flammability** Not applicable.

**Flammability (Train fire)** Not applicable.

**Molecular formula** (N-H<sub>4</sub>)<sub>2</sub>-S-O<sub>4</sub>

**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.

<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Excessive heat.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Ammonia fumes may be released upon heating.

## 11. Toxicological information

### Information on likely routes of exposure

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

**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
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Ammonium sulfate (CAS 7783-20-2)

#### Acute

##### Inhalation

LC50	Rat	> 1000 mg/m <sup>3</sup> , 8 hours
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##### Oral

LD50	Rat	2840 mg/kg
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**Skin corrosion/irritation** May cause irritation through mechanical abrasion.

**Serious eye damage/eye irritation** May cause irritation through mechanical abrasion.

### Respiratory or skin sensitization

**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.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**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
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Ammonium sulfate (CAS 7783-20-2)

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

### 13. Disposal considerations

<b>Disposal instructions</b>	Do not discharge into drains or the environment, please contact your local municipality / waste handler for disposal requirements.
<b>Hazardous waste code</b>	Not regulated.
<b>Waste from residues / unused products</b>	Dispose in accordance with all applicable regulations.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	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.

**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**

Not listed.

**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 listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Ammonium sulfate (CAS 7783-20-2)

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

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** 26-February-2015

**Revision date** -

**Version #** 01

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings** Health: 1  
Flammability: 0  
Physical hazard: 0

**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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