

1. Identification**Product identifier** Ammonium Thiosulfate Solution (15-0-0-20)**Other means of identification****SDS Number** KF_ATS150020_US_EN**Synonyms** ATS 15-0-0-20 ***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** The mixture does not meet the criteria for classification.**Precautionary statement****Prevention** Observe good industrial hygiene practices.**Response** Wash hands after handling.**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.**Supplemental information**

Not applicable.

3. Composition/information on ingredients**Mixtures**

Chemical name	CAS number	%
Ammonium thiosulfate	7783-18-8	45 - 55
Water	7732-18-5	30 - 50

Ammonium nitrate	6484-52-2	8 - 10
Urea	57-13-6	6 - 8
Ammonium Sulfite	10196-04-0	1 - 5

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 Move person to fresh air. If the affected person is not breathing, apply artificial respiration. Get medical attention immediately.

Skin contact Wash contact areas with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists after washing.

Ingestion Rinse mouth thoroughly. Drink 1 or 2 glasses of water. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention.

Most important symptoms/effects, acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Water spray. Carbon dioxide (CO₂). Foam.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

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 it without risk.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Avoid inhalation of vapors and spray mist and contact with skin and eyes. Wear suitable protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

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 inhalation of vapors/spray and contact with skin and eyes. Use only 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

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Urea (CAS 57-13-6)	TWA	10 mg/m ³	Total particulate.
Biological limit values	No biological exposure limits noted for the ingredient(s).		
Exposure guidelines	Follow standard monitoring procedures.		
Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Provide eyewash station. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mist.		
Individual protection measures, such as personal protective equipment			
Eye/face protection	Wear approved safety glasses or goggles.		
Skin protection			
Hand protection	Chemical resistant gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.		
Other	Wear appropriate clothing to prevent repeated or prolonged 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 vapors, use suitable respiratory equipment. 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	Clear liquid.
Physical state	Liquid.
Form	Liquid.
Color	Clear.
Odor	Slight ammonia.
Odor threshold	Not available.
pH	7.5
Melting point/freezing point	-31 °F (-35 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and 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	Heat. Extreme temperatures.
Incompatible materials	Strong oxidizing agents. Acids. Alkalis. Water reactive materials.
Hazardous decomposition products	Ammonia. Sulfur oxides. Ammonium sulfate. Hydrogen sulfide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Vapors and spray mist may irritate throat and respiratory system and cause coughing.
Skin contact	Prolonged or repeated skin contact may cause irritation.
Eye contact	May cause eye irritation on direct contact.
Ingestion	Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity May cause discomfort if swallowed.

Components	Species	Test Results
Ammonium nitrate (CAS 6484-52-2)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 88.8 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	4500 mg/kg
Ammonium thiosulfate (CAS 7783-18-8)		
Acute		
<i>Oral</i>		
LD50	Rat	2890 mg/kg
Urea (CAS 57-13-6)		
Acute		
<i>Oral</i>		
LD50	Rat	8471 mg/kg
Skin corrosion/irritation	Prolonged exposure may cause skin irritation.	
Serious eye damage/eye irritation	May cause eye irritation on direct contact.	
Respiratory or skin sensitization		
Respiratory sensitization	No data available.	
Skin sensitization	No data available.	
Germ cell mutagenicity	No data available.	
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	No data available.
Specific target organ toxicity - single exposure	No data available.
Specific target organ toxicity - repeated exposure	No data available.
Aspiration hazard	Not classified.
Chronic effects	Prolonged exposure may cause chronic effects.
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.

Components	Species	Test Results
Urea (CAS 57-13-6)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 3910 mg/l, 48 hours
Fish	LC50	Giant gourami (Colisa fasciata) 5 mg/l, 96 hours

Persistence and degradability No data available.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Urea (CAS 57-13-6) -2.11

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 allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

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

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

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)

Ammonium Sulfite (CAS 10196-04-0)

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)

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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.

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 nitrate (CAS 6484-52-2)
 Ammonium Sulfite (CAS 10196-04-0)
 Ammonium thiosulfate (CAS 7783-18-8)

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

Ammonium nitrate (CAS 6484-52-2)
 Ammonium Sulfite (CAS 10196-04-0)

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

Ammonium nitrate (CAS 6484-52-2)
 Ammonium Sulfite (CAS 10196-04-0)
 Ammonium thiosulfate (CAS 7783-18-8)

US. Rhode Island RTK

Ammonium nitrate (CAS 6484-52-2)
 Ammonium Sulfite (CAS 10196-04-0)

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 24-July-2015
Revision date -
Version # 01
Further information HMIS® is a registered trade and service mark of the NPCA.
HMIS® ratings Health: 1
 Flammability: 1
 Physical hazard: 0

NFPA ratings**List of abbreviations**

EC50: Effective concentration, 50%.

LC50: Lethal Concentration, 50%.

References

EPA: Acquire database

HSDB® - Hazardous Substances Data Bank

Disclaimer

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.