

SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: AMMONIUM SULFATE SOLUTION

Other means of identification

None.

Recommended restrictions

Recommended use: For industrial use Fertilizer

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
299 Jefferson Road
Parsippany, NJ 07054
USA

Telephone : +1 973 929 8000

Fax : +1 973 929 8040

E-mail : product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency : 800 681 9531 (CHEMTREC MEXICO)

+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable

Precautionary Statements

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
Ammonium-sulphate		7783-20-2	35 - 45%

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments: Aqueous Solution

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information: Pay attention to self-protection. Remove victims from hazardous area. Immediately remove soiled or soaked clothing and remove it to a safe distance. Keep victim warm, in a stabilized position and covered. Do not leave victims unattended. If the casualty is unconscious: Place the victim in the recovery position.

Inhalation: Inhalation is possible if aerosols, mists, dusts, or smoke form. Move victims into fresh air. With labored breathing: Provide with oxygen. Consult a doctor. If the casualty is not breathing: Perform mouth-to-mouth resuscitation, notify emergency physician immediately.

Skin Contact: Wash off affected area immediately with plenty of water for at least 15 minutes. If symptoms persist, consult a physician for treatment.

Eye contact: With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes. In case of persistent discomfort: Consult an ophthalmologist.

Ingestion: Rinse mouth. Immediately give large quantities of water to drink. Obtain medical attention.

Personal Protection for First-aid Responders: In the event of fire, wear self-contained breathing apparatus.

Most important symptoms/effects, acute and delayed

Symptoms: None known.

Hazards: Other dangerous properties can not be excluded.

Indication of immediate medical attention and special treatment needed

Treatment: This substance does not have any noteworthy noxious potential. Damage to health is thus not expected.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water, mist quenching powder foam

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Hazard-determining flue gases might develop in case of fire: Nitrogen Oxides Ammonia sulfur dioxide

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Solution is not flammable. At temperatures of 235 °C Ammonia can be emitted. Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Contaminated fire-extinguishing water must be disposed of in accordance with the regulations issued by the appropriate local authorities. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin and the eyes. Immediately remove wet clothing. Before tackling a spillage put on protective equipment including suitable goggles, gloves, protective overalls and boots. Smoking, eating and drinking should be prohibited in the application area.

Methods and material for containment and cleaning up: Absorb with liquid-binding material e.g. inert absorbent Dispose of absorbed material in accordance with the regulations.

Environmental Precautions: Prevent leakage or spillage.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation): No data available.

Safe handling advice: Handle in accordance with good industrial hygiene and safety practice. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. No special measures are necessary if properly handled.

Contact avoidance measures: No data available.

Hygiene measures: No eating, drinking, smoking, or snuffing tobacco at work.

Storage

Safe storage conditions: Do not store together with: alkalis. Do not store together with: Nitrites The product itself does not burn. Standard procedure for chemical fires. see section 5. Ensure there are sufficient retaining facilities for water used to extinguish fire.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

Eye/face protection: goggles

Skin Protection

Hand Protection: Material: Natural rubber.
 Break-through time: > 480 min
 Guideline: DIN EN 374

Skin and Body Protection: No special protective equipment required.

Respiratory Protection: If ammonia occurs: Respirator with green K-type filter

Hygiene measures: No eating, drinking, smoking, or snuffing tobacco at work.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	colourless to bluish
Odor:	odourless
Odor Threshold:	Not applicable
pH:	4 - 9
Freezing point:	No data available.
Boiling Point:	not determined
Flash Point:	not relevant, since based on water
Evaporation Rate:	No data available.
Flammability (solid, gas):	not to be expected, given the composition employed
Explosive limit - upper (%):	not relevant, since based on water
Explosive limit - lower (%):	not relevant, since based on water
Vapor pressure:	not determined
Vapor density (air=1):	No data available.
Density:	1.2 g/cm ³
Relative density:	1.2 Water = 1
Solubility in Water:	completely miscible

Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable Mixture
Self Ignition Temperature:	not to be expected, given the composition employed
Decomposition Temperature:	No data available.
Kinematic viscosity:	No data available.
Dynamic viscosity:	No data available.
Other information	
Explosive properties:	not to be expected, given the composition employed
Oxidizing properties:	Not to be expected in view of the structure
Metal Corrosion:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	No data available.
Possibility of hazardous reactions:	No hazardous reactions are known if properly handled and stored.
Conditions to avoid:	No further information available
Incompatible Materials:	alkali nitrite alkalis
Hazardous Decomposition Products:	ammonia

11. Toxicological information

Information on likely routes of exposure

Inhalation:	Relevant route of exposure. Information on effects are given below.
Skin Contact:	Relevant route of exposure. Information on effects are given below.
Eye contact:	Relevant route of exposure. Information on effects are given below.
Ingestion:	If handled correctly, not a relevant route of exposure. Information on effects are given below.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product:	Acute toxicity estimate: > 5,000 mg/kg Not classified for acute toxicity based on available data.
----------------------	--

Dermal Product: Not classified for acute toxicity based on available data.

Inhalation Product: not required
Not classified for acute toxicity based on available data.

Repeated dose toxicity Product: No data available.

Components:
Ammonium-sulphate NOAEL (Rat(male/female), Oral, continuous): 256 mg/kg No toxicological effects relevant to classification literature
No toxicological effects relevant to classification literature
No toxicological effects relevant to classification literature

Skin Corrosion/Irritation Product: No data available.

Components:
Ammonium-sulphate OECD Test Guideline 404 (Rabbit): Not irritating , 20 h
No information available. (Rabbit): Not irritating , 20 h

Serious Eye Damage/Eye Irritation Product: No data available.

Components:
Ammonium-sulphate Rabbit, 1 h: Not irritating

Respiratory or Skin Sensitization Product: No data available.

Components:
Ammonium-sulphate Maximization test, US-EPA-method (Guinea Pig): Did not cause sensitisation on laboratory animals. The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). literature

Carcinogenicity Product: An Expert Judgment stated that no classification is necessary based on present knowledge.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity
In vitro

Product: No data available.

Components:

Ammonium-sulphate Ames test (OECD TG 471): negative literature
 Chromosome aberration test in vitro (OECD TG 473): negative literature
 In vitro mammalian cell gene mutation test (OECD Test Guideline 476): negative literature

In vivo

Product: Chromosomal aberration intraperitoneal (i.p.) (Mouse, male): negative literature

Reproductive toxicity

Product: No data available.

Components:

Ammonium-sulphate According to current knowledge, reprotoxic effects are not to be expected from repeated administration in the toxicity tests. Not classified

Specific Target Organ Toxicity - Single Exposure

Product: Not classified

Specific Target Organ Toxicity - Repeated Exposure

Product: Not classified

Aspiration Hazard

Product: No data available.

Components:

Ammonium-sulphate Not classified

Other effects: No data available.

12. Ecological information
Ecotoxicity:
Acute hazards to the aquatic environment:
Fish

Product: LC 50 (Oncorhynchus mykiss, 96 h): 53 mg/l literature
 LC 50 (Prosopium williamsoni, 96 h): 57.2 mg/l literature

Aquatic Invertebrates

Product: EC 50 (Daphnia magna, 48 h): 129 mg/l literature
 EC 50 (Daphnia magna, 96 h): > 100 mg/l literature
 EC 50 (Ceriodaphnia, 48 h): 121.7 mg/l literature
 EC 50 (Daphnia magna, 48 h): 169 mg/l literature

Chronic hazards to the aquatic environment:
Fish

Product: No data available.

Components:

Ammonium-sulphate EC 10 (Bluegill Sunfish, 30 d): 5.29 mg/l literature

Aquatic Invertebrates**Product:** EC10 (Hyalella azteca, 70 d): 3.12 mg/l literature**Toxicity to Aquatic Plants****Product:** EC 50 (Chlorella vulgaris, 18 d): 2,700 mg/l (literature value)**Persistence and Degradability****Biodegradation****Product:** The methods for determining biodegradability are not applicable to inorganic substances.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative potential****Bioconcentration Factor (BCF)****Product:** Not to be expected.**Partition Coefficient n-octanol / water (log Kow)****Product:** Log Kow: Not applicable Mixture**Mobility in soil:**

No data available.

Components:

Ammonium-sulphate No data available.

Other adverse effects:

No further information available

13. Disposal considerations**Disposal methods:**

Can be disposed of as a solid waste or burned in a suitable installation subject to local regulations.

Contaminated Packaging:

Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities. Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.

14. Transport information**Domestic regulation****49 CFR**

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information**US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Calculated RQ exceeds reasonably attainable upper limit.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories****US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances**

Calculated RQ exceeds reasonably attainable upper limit.

US. EPCRA (SARA Title III) Section 312 Extremely Hazardous Substances Reporting Quantities (40 CFR 355, Appendix A)

Not regulated.

Chemical Identity

Ammonium-sulphate

Threshold Planning Quantity

10000 lbs

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required**Reporting threshold for****Chemical Identity**

Ammonium-sulphate

other users

Otherwise used (non-manufacturing/processing)

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

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

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

Not regulated.

US. Massachusetts RTK - Substance List

Chemical Identity

Ammonium-sulphate

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Ammonium-sulphate

US. Rhode Island RTK

Chemical Identity

Ammonium-sulphate

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

HMIS Hazard ID

Health	1
Flammability	0
Physical Hazards	0
PERSONAL PROTECTION	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 10/08/2019

Version #: 1.0

Further Information: No data available.

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Disclaimer:

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.