

AMMONIUM SULFATE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 09/18/2014 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Trade name : AMMONIUM SULFATE
CAS No : 7783-20-2
Product code : AB00110
Formula : (NH₄)₂SO₄

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Laboratory use/Manufacturing component/Research
Use of the substance/mixture : Dyestuff/pigment: production
Fire extinguishing medium
Fertilizer

1.3. Details of the supplier of the safety data sheet

AmericanBio, Inc.
15 Erie Dr.
Natick, MA 01760 - USA
T 800.443.0600 - F 508.655.2754
info@americanbio.com - www.americanbio.com

1.4. Emergency telephone number

Emergency number : 855.835.2572 (U.S.) :: 760.602.8703 (Outside U.S.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
AMMONIUM SULFATE (Main constituent)	(CAS No) 7783-20-2	100	Not classified

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. ON CONTINUOUS EXPOSURE/CONTACT: Irritation of the respiratory tract.
Symptoms/injuries after skin contact	: Red skin. Slight irritation.
Symptoms/injuries after eye contact	: Slight irritation.
Symptoms/injuries after ingestion	: Vomiting. Nausea. Diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

suitable extinguishing media	: EXTINGUISHING MEDIA FOR SURROUNDING FIRES: All extinguishing media allowed. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: No unsuitable extinguishing media known. Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity	: Decomposes on exposure to temperature rise: release of toxic and corrosive gases/vapours (ammonia, nitrous vapours, sulphur oxides). Reacts with (strong) oxidizers: (increased) risk of fire/explosion. Violent exothermic reaction with (some) bases: release of toxic and corrosive gases/vapours (ammonia, sulphur oxides).

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Evacuate unnecessary personnel.
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

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6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. If reacting: dilute toxic gas/vapour with water spray.

Methods for cleaning up : Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight. Keep container closed when not in use.

Incompatible products : Strong bases. strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. metals. water/moisture.

Storage area : Store in a dry area. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: paper. wood. textile. MATERIAL TO AVOID: copper. zinc. bronze.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Materials for protective clothing : GIVE GOOD RESISTANCE: butyl rubber. neoprene. PVC. GIVE LESS RESISTANCE: polyethylene. styrene-butadiene rubber. nitrile rubber/PVC.

Hand protection : Gloves. Wear protective gloves.

Eye protection : Safety glasses. In case of dust production: protective goggles. Chemical goggles or safety glasses.

Skin and body protection : Protective clothing.

Respiratory protection : Dust production: dust mask with filter type P1. Wear approved mask.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline solid. Powder.

Molecular mass : 132.16 g/mol

Color : Colourless-white. Unpurified: grey-brown.

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Odor	: Odourless.
Odor threshold	: No data available
pH	: 5.5 (1.3 %)
pH solution	: 1.3 %
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 280 °C
Freezing point	: No data available
Boiling point	: Not applicable
Flash point	: Not applicable
Self ignition temperature	: Not applicable
Decomposition temperature	: > 280 °C
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.8
Density	: 1770 kg/m ³
Solubility	: Soluble in water. Water: 77 g/100ml
Log Pow	: -5.1
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

Minimum ignition energy	: Not applicable
SADT	: Not applicable
VOC content	: Not applicable
Other properties	: Hygroscopic. Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Decomposes on exposure to temperature rise: release of toxic and corrosive gases/vapours (ammonia, nitrous vapours, sulphur oxides). Reacts with (strong) oxidizers: (increased) risk of fire/explosion. Violent exothermic reaction with (some) bases: release of toxic and corrosive gases/vapours (ammonia, sulphur oxides).

10.2. Chemical stability

Hygroscopic. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

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LD50 oral rat	2840 mg/kg (Rat)
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Skin corrosion/irritation	: Not classified pH: 5.5 (1.3 %)
Serious eye damage/irritation	: Not classified pH: 5.5 (1.3 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. ON CONTINUOUS EXPOSURE/CONTACT: Irritation of the respiratory tract.
Symptoms/injuries after skin contact	: Red skin. Slight irritation.
Symptoms/injuries after eye contact	: Slight irritation.
Symptoms/injuries after ingestion	: Vomiting. Nausea. Diarrhoea.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Mild water pollutant (surface water). Maximum concentration in drinking water: 0.50 mg/l (ammonium) (Directive 98/83/EC); 250 mg/l (sulfate) (Directive 98/83/EC). Slightly harmful to fishes (LC50(96h) 100-1000 mg/l). Slightly harmful to invertebrates (EC50: 100 - 1000 mg/l). May cause eutrophication. Insufficient data available on ecotoxicity.

AMMONIUM SULFATE (7783-20-2)	
LC50 fish 1	126 mg/l (96 h; <i>Poecilia reticulata</i>)
EC50 Daphnia 1	202 mg/l (96 h; <i>Daphnia magna</i>)
LC50 fish 2	250 - 480 mg/l (96 h; <i>Brachydanio rerio</i>)
EC50 Daphnia 2	433 mg/l (50 h; <i>Daphnia magna</i>)
TLM fish 1	1290 ppm (96 h; <i>Gambusia affinis</i>)

12.2. Persistence and degradability

AMMONIUM SULFATE (7783-20-2)	
Persistence and degradability	Biodegradability in water: no data available. Not established.

12.3. Bioaccumulative potential

AMMONIUM SULFATE (7783-20-2)	
Log Pow	-5.1
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Precipitate/make insoluble. Remove to an authorized dump. Do not discharge into surface water. Dispose in a safe manner in accordance with local/national regulations.

Additional information : LWCA (the Netherlands): KGA category 05. Can be considered as non hazardous waste according to Directive 2008/98/EC.

Ecology - waste materials : Avoid release to the environment.

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SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

State during transport (ADR-RID) : Rail and road transport: not subject to ADR-RID.

ADR

Transport document description : UN N/A

Packing group (ADR) : N/A

Hazard identification number (Kemler No.) : N/A

Classification code (ADR) : N/A

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

AMMONIUM SULFATE (7783-20-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

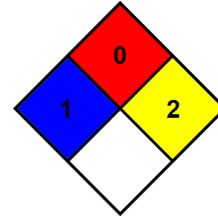
Other information : None.

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- NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
- NFPA fire hazard : 0 - Materials that will not burn.
- NFPA reactivity : 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.



SDS US (GHS HazCom 2012)

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