

Safety Data Sheet

File version: 1

Ammonium sulfate, 3.5M

SDS Date: 28 Nov 2016

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3.5M Ammonium sulfate
SYNONYMS: Ammonium sulphate
PRODUCT CODES: 1008358
1008359
MANUFACTURER: Rigaku Reagents
ADDRESS: 9009 New Trails Drive
The Woodlands, TX 77381
USA
PHONE: +1 (281) 362-2300 x 502
EMAIL: Reagentorders@rigaku.com

CHEMICAL NAME: Ammonium sulfate
CHEMICAL FORMULA: (NH₄)₂SO₄

PREPARED BY: Rigaku Reagents

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

OSHA HAZARDS: No known OSHA hazards

GHS CLASSIFICATION

Acute toxicity, Oral (Category 5)

Acute aquatic toxicity (Category 3)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Signal word: Warning

Hazard statement(s):

H303 May be harmful if swallowed.

H402 Harmful to aquatic life.

Precautionary statement(s):

none

POTENTIAL HEALTH EFFECTS:

EYES: May causes eye irritation.

SKIN: May be harmful if absorbed through skin. May cause skin irritation.

INGESTION: May be harmful if swallowed.

INHALATION: May be harmful if inhaled. May cause respiratory tract irritation.

SECTION 2 NOTES:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS: Ammonium sulfate, De-ionized water

Ammonium sulfate:

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>
7783-20-2	46.249	

SECTION 3 NOTES:

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SECTION 4: FIRST AID MEASURES

EYES: Flush eyes with water as a precaution.**SKIN:** Wash off with soap and plenty of water. Consult a physician.**INGESTION:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.**INHALATION:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.**SECTION 4 NOTES:**

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT:

F: No data available

C: No data available

AUTOIGNITION TEMPERATURE:

F: No data available

C: No data available

NFPA HAZARD CLASSIFICATION

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

HMS HAZARD CLASSIFICATION

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 0

EXTINGUISHING MEDIA: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO_x), sulfur oxides.**SECTION 5 NOTES:** The product itself does not burn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.**ENVIRONMENTAL PRECAUTIONS:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Contain spillage, and then collect in a safe way or by wet brushing and place in suitable, closed containers for disposal.**SECTION 6 NOTES:**

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep container tightly closed in a dry and well-ventilated place.**SECTION 7 NOTES:**

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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RESPIRATORY PROTECTION: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

EYE PROTECTION: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

SKIN PROTECTION: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: clear, colorless

PHYSICAL STATE: liquid, clear

pH AS SUPPLIED: No data available

pH (Other): 5.0-6.0

BOILING POINT:

F: No data available

C: No data available

FREEZING POINT:

F: No data available

C: No data available

VAPOR PRESSURE (mmHg): No data available

@

F: No data available

C: No data available

VAPOR DENSITY (AIR = 1): No data available

SPECIFIC GRAVITY (H₂O = 1): No data available

@

F: No data available

C: No data available

EVAPORATION RATE: No data available

SOLUBILITY IN WATER: Completely soluble

VISCOSITY: No data available

@

F: No data available

C: No data available

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under recommended storage conditions.

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CONDITIONS TO AVOID (STABILITY): No data available**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong oxidizing agents, strong bases**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Sulfur oxides. Other decomposition products - no data available**SECTION 10 NOTES:**

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

ORAL LD50: No data available
INHALATION LC50: No data available
DERMAL LD50: No data available

SKIN CORROSION/IRRITATION:

Rabbit - No skin irritation
Human - Mild skin irritation

SERIOUS EYE DAMAGE/EYE IRRITATION:

Rabbit - No eye irritation
Human - Mild eye irritation

RESPIRATORY OR SKIN SENSITIZATION: No data available**GERM CELL MUTAGENICITY:** No data available**CARCINOGENICITY:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY: No data available**SECTION 11 NOTES:**

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:

TOXICITY TO FISH: LC50 - Oncorhynchus mykiss (rainbow trout) - 36.7 mg/l - 96 h
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES: LC50 - Daphnia magna (Water flea) - 433 mg/l - 50 h

PERSISTENCE AND DEGRADABILITY

No data available

BIOACCUMULATIVE POTENTIAL

No data available

MOBILITY IN SOIL

No data available

PBT AND vPvB ASSESSMENT

No data available

SECTION 12 NOTES: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

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SECTION 13: DISPOSAL CONSIDERATIONS

PRODUCT: Offer surplus and non-recyclable solutions to a licensed disposal company.**CONTAMINATED PACKAGING:** Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

Not dangerous goods

WATER TRANSPORTATION

Not dangerous goods

AIR TRANSPORTATION

Not dangerous goods

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

OSHA HAZARDS: No known OSHA hazards**SARA 302 COMPONENTS:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**SARA 313 COMPONENTS:**

	<u>CAS-No.</u>
Ammonium sulfate	7783-20-2

SARA 311/312 HAZARDS: No SARA Hazards**MASSACHUSETTS RIGHT TO KNOW COMPONENTS:**

	<u>CAS-No.</u>
Ammonium sulfate	7783-20-2

PENNSYLVANIA RIGHT TO KNOW COMPONENTS:

	<u>CAS-No.</u>
Ammonium sulfate	7783-20-2
Water	7732-18-5

NEW JERSEY RIGHT TO KNOW COMPONENTS:

	<u>CAS-No.</u>
Ammonium sulfate	7783-20-2
Water	7732-18-5

CALIFORNIA PROP. 65 COMPONENTS: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.**SECTION 15 NOTES:**

SECTION 16: OTHER INFORMATION

DISCLAIMER: The above information is believed to be correct but does not necessarily include all information and should be used only as a guide. The information in this document is based on our current knowledge and applies to the product with regard to appropriate safety precautions. This document does not represent any guarantee of the properties of the product. Rigaku Reagents will not be held liable for any damage resulting from handling or contact with the above product.