

Safety Data Sheet

File version: 1

Ammonium sulfate, 4M

SDS Date: 28 Nov 2016

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**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

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**PRODUCT NAME:** 4M Ammonium sulfate  
**SYNONYMS:** Ammonium sulphate  
**PRODUCT CODES:** 1008374  
1008375  
**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:**  $(\text{NH}_4)_2\text{SO}_4$

**PREPARED BY:** Rigaku Reagents

**SECTION 1 NOTES:**

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**SECTION 2: HAZARDS IDENTIFICATION**

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**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:**

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

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**INGREDIENTS:** Ammonium sulfate, De-ionized water

**Ammonium sulfate:**

**CAS NO.**  
7783-20-2

**% WT**  
52.856

**% VOL**

**SECTION 3 NOTES:**

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**SECTION 4: FIRST AID MEASURES**

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**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:**

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**SECTION 5: FIRE-FIGHTING MEASURES**

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**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****HMIS 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 (NOx), sulfur oxides.**SECTION 5 NOTES:** The product itself does not burn.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**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 wetbrushing and place in suitable, closed containers for disposal.**SECTION 6 NOTES:**

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**SECTION 7: HANDLING AND STORAGE**

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**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:**

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**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:**

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**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

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**F:** No data available

**C:** No data available

**VAPOR DENSITY (AIR = 1):** No data available

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** No data available

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**F:** No data available

**C:** No data available

**EVAPORATION RATE:** No data available

**SOLUBILITY IN WATER:** Completely soluble

**VISCOSITY:** No data available

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**F:** No data available

**C:** No data available

**SECTION 9 NOTES:**

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**SECTION 10: STABILITY AND REACTIVITY**

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**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 (NO<sub>x</sub>), Sulfur oxides. Other decomposition products - no data available**SECTION 10 NOTES:**

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**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:**

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**SECTION 12: ECOLOGICAL INFORMATION**

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**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**

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

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**SECTION 14: TRANSPORT INFORMATION**

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**U.S. DEPARTMENT OF TRANSPORTATION**

Not dangerous goods

**WATER TRANSPORTATION**

Not dangerous goods

**AIR TRANSPORTATION**

Not dangerous goods

**SECTION 14 NOTES:**

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**SECTION 15: REGULATORY INFORMATION**

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**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:**

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**SECTION 16: OTHER INFORMATION**

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**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.