

Safety Data Sheet

File version: 1

Ammonium formate, 1M

SDS Date: 27 Nov 2016

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**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

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**PRODUCT NAME:** 1M Ammonium formate  
**PRODUCT CODES:** 1008103  
1008104  
**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 formate  
**CHEMICAL FAMILY:** Ammonium salts  
**CHEMICAL FORMULA:** NH<sub>4</sub>HCO<sub>2</sub>

**PREPARED BY:** Rigaku Reagents

**SECTION 1 NOTES:**

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**SECTION 2: HAZARDS IDENTIFICATION**

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**EMERGENCY OVERVIEW:**

**OSHA HAZARDS:** Irritant

**TARGET ORGANS:** Bone

**GHS CLASSIFICATION**

Acute toxicity, Oral (Category 5)  
Skin irritation (Category 2)  
Eye irritation (Category 2A)  
Specific target organ toxicity - single exposure (Category 3)

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS**

**Signal word:** Warning

**Hazard statement(s):**

H303 May be harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

**Precautionary statement(s):**

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**POTENTIAL HEALTH EFFECTS:**

**EYES:** Causes eye irritation.

**SKIN:** May be harmful if absorbed through skin. Causes skin irritation.

**INGESTION:** May be harmful if swallowed.

**INHALATION:** May be harmful if inhaled. Causes respiratory tract irritation.

**SECTION 2 NOTES:**

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

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**INGREDIENTS:** Ammonium formate, De-ionized water**AMMONIUM FORMATE:**

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>
540-69-2	6.306	

**SECTION 3 NOTES:****SECTION 4: FIRST AID MEASURES****EYES:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.**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: 2****FLAMMABILITY: 0****REACTIVITY: 0****HMS HAZARD CLASSIFICATION****HEALTH: 2****FLAMMABILITY: 0****REACTIVITY: 0****EXTINGUISHING MEDIA:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>)**SECTION 5 NOTES:****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:** Do not let product enter drains.**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Keep in suitable, closed containers for disposal.**SECTION 6 NOTES:****SECTION 7: HANDLING AND STORAGE**

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**HANDLING AND STORAGE:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

**SECTION 7 NOTES:****SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**RESPIRATORY PROTECTION:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**EYE PROTECTION:** Safety glasses with side-shields conforming to EN166 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:** Impervious clothing, flame retardant antistatic protective clothing, 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):** 5.5-7.5

**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.**CONDITIONS TO AVOID (STABILITY):** No data available**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong oxidizing agents, strong acids**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>) 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:** Mouse - 2,250 mg/kg**INHALATION LC50:** No data available**DERMAL LD50:** No data available**SKIN CORROSION/IRRITATION:** No data available**SERIOUS EYE DAMAGE/EYE IRRITATION:** No data available**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**

No data available

**PERSISTENCE AND DEGRADABILITY**

No data available

**BIOACCUMULATIVE POTENTIAL**

No data available

**MOBILITY IN SOIL**

No data available

**PBT AND vPvB ASSESSMENT**

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No data available

**SECTION 12 NOTES:****SECTION 13: DISPOSAL CONSIDERATIONS**

**PRODUCT:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**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:** Irritant

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

**SARA 313 COMPONENTS:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 HAZARDS:** Acute health hazard, chronic health hazard

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS:**

	<u>CAS-No.</u>
Ammonium formate	540-69-2

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS:**

Ammonium formate	540-69-2
Water	7732-18-5

**NEW JERSEY RIGHT TO KNOW COMPONENTS:**

	<u>CAS-No.</u>
Ammonium formate	540-69-2
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.