Safety Data Sheet

File version: 1

Potassium nitrate, 1M

SDS Date: 05 Dec 2016

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 1M Potassium nitrate
PRODUCT CODES: 1008210
1008211
MANUFACTURER: Rigaku Reagents
ADDRESS: 9009 New Trails Drive
The Woodlands, TX 77381
USA
PHONE: +1 (281) 362-2300
EMAIL: ReagentOrders@Rigaku.com

CHEMICAL NAME: Potassium nitrate
CHEMICAL FORMULA: KNO_3

PREPARED BY: Rigaku Reagents

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

OSHA HAZARDS: Oxidizer, carcinogen, target organ effect

TARGET ORGANS: Blood, central nervous system

GHS CLASSIFICATION
Oxidizing solids (Category 3)
Acute toxicity, Oral (Category 5)
Acute aquatic toxicity (Category 3)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Signal word: Warning
Hazard statement(s):
H272 May intensify fire; oxidizer.
H303 May be harmful if swallowed.
H402 Harmful to aquatic life.
Precautionary statement(s):
P220 Keep/Store away from clothing/ combustible materials.

POTENTIAL HEALTH EFFECTS:

EYES: May cause 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: Potassium nitrate, De-ionized water

POTASSIUM NITRATE:

CAS NO.	% WT	% VOL
7757-79-1	9-11.5	

SECTION 3 NOTES:

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: 1**

HMIS HAZARD CLASSIFICATION
HEALTH: 1 **FLAMMABILITY: 0** **REACTIVITY: 1**

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), Potassium oxides

SECTION 5 NOTES: Use water spray to cool unopened containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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 with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. Normal measures for preventive fire protection. Keep container tightly closed in a dry and well-ventilated place.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear impervious 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): 5.5-8.0

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.

CONDITIONS TO AVOID (STABILITY): No data available

INCOMPATIBILITY (MATERIAL TO AVOID): Strong reducing agents, powdered metals, strong acids, organic materials

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Potassium oxides. Other decomposition products - no data available

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

ORAL LD50: Rat - 3,750 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: 2A - Group 2A: Probably carcinogenic to humans (Potassium nitrate)
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:

Rat – oral:
Effects on fertility: other measures of fertility
Effects on newborn: behavioral.
Rabbit - oral
Effects on fertility: abortion.
Guinea pig - oral
Effects on newborn: stillbirth.
Effects on fertility: female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated).
Effects on embryo or fetus: other effects to embryo.

SECTION 11 NOTES: Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:

TOXICITY TO FISH: LC50 - Gambusia affinis (Mosquito fish) - 22.5 mg/l - 96 h
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES: EC50 - Daphnia magna (Water flea) - 226 mg/l - 72 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.

SECTION 13: DISPOSAL CONSIDERATIONS

PRODUCT: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

CONTAMINATED PACKAGING: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME:	Potassium nitrate, solution
HAZARD CLASS:	5.1
ID NUMBER:	1486
PACKING GROUP:	III
MARINE POLLUTANT:	No
POISON INHALATION HAZARD:	No

WATER TRANSPORTATION

PROPER SHIPPING NAME:	POTASSIUM NITRATE SOLUTION
HAZARD CLASS:	5.1
ID NUMBER:	1486
PACKING GROUP:	III EMS-No: F-A, S-Q
MARINE POLLUTANT:	No

AIR TRANSPORTATION

PROPER SHIPPING NAME:	Potassium nitrate, solution
HAZARD CLASS:	5.1
ID NUMBER:	1486
PACKING GROUP:	III

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

OSHA HAZARDS: Oxidizer, carcinogen, target organ effect

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: No SARA Hazards

MASSACHUSETTS RIGHT TO KNOW COMPONENTS:

	CAS-No.
Potassium nitrate	7757-79-1

PENNSYLVANIA RIGHT TO KNOW COMPONENTS:

	CAS-No.

Potassium nitrate	7757-79-1
Water	7732-18-5

NEW JERSEY RIGHT TO KNOW COMPONENTS:

	CAS-No.
Potassium nitrate	7757-79-1
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.