JOHNSON MANUFACTURING COMPANY Material Safety Data Sheet

to comply with 29 CFR 1910.1200, OSHA's Hazard Communication Standard

Muriatic Acid, 25-00

Section I:

 Johnson Manufacturing Company
 Emergency Telephone (563)-289-5123

 114 Lost Grove Road
 CHEMTREC 1-(800)-424-9300

 Princeton IA 52768
 Revised 1/1/2012

Section II: Hazardous Ingredients/Identity information

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Hazardous Component CAS # OSHA TWA ACGIH TWA Other limits

+ hydrogen chloride 7647-01-0 2ppm C 5ppm C NE 35 %
C = Ceiling concentration
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Only those ingredients listed in this section have been determined to be hazardous as defined in 29CFR 1910.1200. An ingredient marked with an asterisk(*) is also listed in 29CFR 1910.1200(D) #4 as a known or suspected cancer hazard.

+ denotes a chemical regulated as toxic by the Environmental Protection Agency (EPA) as outlined in 40CFR Part 372 (section 313)

Section III: Physical/Chemical Characteristics

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Boiling Point: 180 F Specific Gravity: 1.16
Vapor Pressure (mm Hg): 35mm @ 25 C Melting Point: - 60 F
Vapor Density: 1.27 Evaporation Rate
Solubility in water: 100 % (butyl acetate=1): < 1
Appearance and odor: clear liquid - chlorine odor
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Section IV: Fire and Explosion Hazard Data

Flash Point: nonflammable Flammable limits lel: NA uel: NA Extinguishing media: all Special fire fighting procedures: use self sustaining respiratory suit Unusual Fire and Explosion Hazards: May release hydrochloric acid fumes.

Section V: Reactivity Data

Stability: STABLE Conditions to avoid: none Incompatibility (materials to avoid): strong bases, metals, cyanides, sulfides. Hazardous Decomposition or Byproducts (incomplete combustion): Hydrochloric acid Hazardous Polymerization: WILL NOT OCCUR Conditions to avoid: none

Skin? no

Section VI: Health Hazard Data Routes of entry: Inhalation? yes

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Health Hazards (acute and chronic) Contact with material, fumes, or mist may cause skin, eye and respiratory tract irritation or burns, some possibly severe. Eye injury may be permanent. Gross or repeated inhalation may result in pulmonary edema, symptoms of which may not manifest for several hours after exposure. Ingestion can result in irritation or burns of the digestive tract. Gross inhalation or ingestion can result in death. LD50 (HCl) (Rabbit)=900mg/Kg. Chronic exposures via inhalation and ingestion may result in liver, spleen, and respiratory tract effects. May be mutagenic in lab animals. Studies show that potential health risks vary by individual. Always minimize exposure as a precaution.
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Ingestion? yes

Carcinogenicity: not determined NTP? no IARC Monographs? no

Signs and symptoms of exposure: Inhalation-Nose & throat irritation, headache, dizziness, difficulty breathing, coughing. Ingestion-nausea, vomiting, cramps. Skin-redness, burning, rash, dryness. Eye-redness, burning, tearing, blurred vision.

Medical Conditions Aggravated by exposure: Liver, spleen, skin and respiratory conditions

Emergency first aid procedures:
Skin: Flush with water immediately - Seek medical attention if necessary
Eyes: Flush with water for 15 minutes - Seek medical attention
Ingestion: Drink large amounts of water, DO NOT induce vomiting-seek medical attention.
Never give anything by mouth to an unconscious person.
Inhalation: Remove to fresh air. Support respiration if required.
Seek medical attention if required.

Section VII: Precautions for Safe Handling and Use

Steps to be taken if material is released or spilled: Flush into a chemical sewer or soak up with a suitable absorbant.

Waste Disposal Method: dispose of in accordance with all local state and federal regulations Other Precautions: Avoid skin & eye contact, inhalation & ingestion of fumes and material. Wash contaminated clothing before reuse. Keep away from children. Do not reuse container.

Section VIII: Control Measures

Respiratory Protection (type): Acid type respirator required for fumes.

Ventilation Local Exhaust preferred Special: NE
Mechanical: OK Other: NE

Protective Gloves: plastic or rubber Eye Protection: Goggles or face shield
Other Protective Clothing or Equipment: as required to avoid contact.

Work/Hygienic Practices: Wash after use. Follow good industrial hygienic practices.

Section IX: Additional Information

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DOT Hazard Classification: Hydrochloric Acid, solution, 8, UN 1789, PG II NFPA Classification (NFPA 325M,8<sup>th</sup> edition) (Health, Flammability, Reactivity): 3-0-1
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OTHER: This product does NOT contains components known to the state of California to cause cancer or reproductive harm.

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NE = not established NA = not applicable

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