

JOHNSON MANUFACTURING COMPANY
Material Safety Data Sheet
to comply with 29 CFR 1910.1200,
OSHA's Hazard Communication Standard

Lloyd's #6 Soldering Flux, 06-00

Section I:

Johnson Manufacturing Company
114 Lost Grove Road
Princeton IA 52768

Emergency Telephone (563)-289-5123
CHEMTREC 1-(800)-424-9300
Revised 1/1/2006

Section II: Hazardous Ingredients/Identity information

Hazardous Component	CAS #	OSHA TWA	ACIGH TWA	Other limits
+ zinc chloride	7646-85-7	1mg/M3	1mg/M3	NE 33 %
ammonium chloride (as Zinc Ammonium Chloride)	12125-02-9	10 mg/M3	fume 10mg/M3	fume NE
ammonium bromide	12124-97-9	NE	NE	NE
ethanol	64-17-5	1000ppm	1000ppm	NE

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

Boiling Point: 174 F
Vapor Pressure (mm Hg): NE
Vapor Density: NE
Solubility in water: 100%
Appearance and odor: Clear liquid, alcohol odor

Specific Gravity: 1.29
Melting Point: NE
Evaporation Rate
(butyl acetate=1): < 1

Section IV: Fire and Explosion Hazard Data

Flash Point: 140 F TOC
Extinguishing media: dry chemical
Special fire fighting procedures: use self sustaining respiratory suit
Unusual Fire and Explosion Hazards: May release hydrochloric acid, hydrobromic acid, zinc chloride, zinc oxide.

Flammable limits lel: NE uel: NE

Section V: Reactivity Data

Stability : STABLE
Incompatibility (materials to avoid): strong bases & acids, oxidizers, sulfides, halogens.

Conditions to avoid : none

Hazardous Decomposition or Byproducts (incomplete combustion): Hydrochloric acid, zinc oxide, ammonia, zinc chloride, and hydrobromic acid.
Hazardous Polymerization: WILL NOT OCCUR Conditions to avoid: none

Section VI: Health Hazard Data

Routes of entry: Inhalation? yes Skin? no Ingestion? yes

Health Hazards (acute and chronic): Contact with material and fumes may cause skin, eye and respiratory tract irritation or burns. Severe inhalation can cause pulmonary edema and nervous system depression, which may not manifest for several hours after exposure.

Ingestion may result in irritation and burning of the digestive tract. Gross inhalation or ingestion may be toxic and can result in death. May be mutagenic in lab animals. May cause sensitization. Chronic exposures can result in permanent liver, eye, kidney, and respiratory system effects. Material is combustible and may burn with a nearly invisible flame. Studies show that potential health risks vary by individual. Always minimize exposure as a precaution.

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: skin, kidney and respiratory conditions

Emergency first aid procedures:

Skin: Flush with water immediately - Seek medical attention if required

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.

Keep away from spark or flame.

Section VIII: Control Measures

Respiratory Protection (type): Acid mask 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

DOT Classification: Non-hazardous

NFPA Classification (NFPA 325M, 8th edition) (Health, Flammability, Reactivity): 2-1-0

This product contains components known to the state of California to cause cancer or reproductive harm.

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to JOHNSON MANUFACTURING at the time of issue. No warranty, guarantee, or representation is made by JOHNSON MANUFACTURING nor does JOHNSON MANUFACTURING assume any responsibility in connection therewithin; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances.

NE = not established NA = not applicable