

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

J-33 Soldering Flux, 30-00

Section I:

Johnson Manufacturing Company
114 Lost Grove Road
Princeton IA 52768

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

Section II: Hazardous Ingredients/Identity information

Hazardous Component	CAS #	OSHA TWA	ACGIH TWA	Other limits	
+ Zinc Chloride	7646-85-7	1mg/M3	1mg/M3	NE	22 %
Ammonium Chloride	12125-02-9	10mg/M3	10mg/M3	NE	
+ Hydrogen Chloride	7647-01-0	5ppm C	5ppm C	NE	5 %

C = Ceiling concentration

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: 240 F
Vapor Pressure (mm Hg): 5 @ 68 F
Vapor Density: NE
Solubility in water: 100 %
Appearance and odor: Red liquid, wintergreen odor

Specific Gravity: 1.25
Melting Point: NE
Evaporation Rate
(butyl acetate=1): < 1

Section IV: Fire and Explosion Hazard Data

Flash Point: nonflammable
Extinguishing media: all
Special fire fighting procedures: NONE
Unusual Fire and Explosion Hazards: May release hydrochloric acid, zinc chloride, zinc oxide.

Flammable limits lel: NA uel: NA

Section V: Reactivity Data

Stability : STABLE
Incompatibility (materials to avoid): oxidizers, strong acids & bases, sulfides.
Hazardous Decomposition or Byproducts (incomplete combustion): Hydrochloric acid, zinc oxide, ammonia, zinc chloride, chlorine
Hazardous Polymerization: WILL NOT OCCUR

Conditions to avoid : none
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 or fumes may cause skin, eye and respiratory tract irritation or burns. Severe inhalation can cause pulmonary edema, which may not manifest for several hours after exposure. Ingestion may result in irritation or burning of the digestive tract. Gross inhalation or ingestion can result in death. LD50 (ZnCl₂) (rat)=350 mg/kg. May be mutagenic in lab animals. May cause sensitization. Chronic exposures can result in permanent liver, kidney and respiratory system effects. Studies show that health risks vary by individual. Minimize exposure as a precaution.

Carcinogenicity: not determined NPT? 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 necessary

Eyes: Flush with water for 15 minutes - Seek medical attention

Ingestion: DO NOT induce vomiting, drink large amounts of water - seek medical attention.

Never give anything by mouth to an unconscious person

Inhalation: Remove to fresh air. Support respiration if required - Seek medical attention.

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 for fumes and mist.

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

Section IX: Additional Information

DOT Classification: Corrosive liquid NOS (Contains Hydrochloric acid & Zinc Chloride), 8, UN 1760, PG II

NFPA Classification (NFPA 325M, 8^{sup}th edition) (Health, Flammability, Reactivity): 2-0-0

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

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NE- not established NA = not applicable

Form 303.68 Rev.A