

# JOHNSON MANUFACTURING COMPANY

## Safety Data Sheet

To comply with 29CFR 1910.1200  
OSHA's Hazard Communication Standard

### Well-Dip Flux Soldering Flux, 18-70

#### 1. PRODUCT AND COMPANY INFORMATION

Johnson Manufacturing Company  
114 Lost Grove Road  
Princeton IA 52768

Emergency Telephone 1-(563)-289-5123  
CHEMTREC AFTER HOURS 1-(800)-424-9300  
Revised 1/1/2018 by JMC Product Safety

#### 2. HAZARD IDENTIFICATION

##### GHS Classification:

Acute Tox. 4 \*  
Skin Corr. 1B  
Aquatic Acute 1  
Aquatic Chronic 1  
Eye Irrit. 2  
STOT SE3  
Skin sens 1  
Resp. sens 1



##### GHS Label Elements:

**HYDROBROMIC ACID & ZINC CHLORIDE**  
**DANGER**

**H Codes:** H302, H314, H319, H317, H334, H335, H410

Harmful if swallowed

Harmful if inhaled

Causes severe skin burns and eye damage

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

Very toxic to aquatic life with long lasting effects

##### P Codes:

P264, 270, 280, 301+312, 330, 501, 260, 301+330+331, 303+361+353+310, 363, 304+340, 321, 405, 273, 305+351+338+310, 337+313, 310, 261, 271, 312, 403+233, 285, 302+352, 342+311, 333+313

Avoid breathing mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Use in a well ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation use respiratory protection. Do not breathe dust/fume/gas/mist/vapor/spray. Do not eat, drink or smoke when using this product. IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER/Doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with soap & water. Get medical advice/attention if you feel unwell or if a rash or irritation occurs. IF INHALED: Remove victim to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call POISON CENTER/Doctor. Wash thoroughly after use. Wash contaminated clothing before reuse. Store in a closed compatible container in cool dry place. Avoid release to the environment. Dispose of contents/container in accordance with specified local/regional/national/international regulations for disposal. Keep out of the reach of children. Read label and SDS prior to use.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component	CAS #	OSHA TWA	ACIGH TWA	Other limits	%
hydrogen bromide	10035-10-6	2ppm C	3ppm C	NE	
ethylenediamine	107-15-3	10ppm	10ppm	NE	
C = Ceiling concentration					
+ Zinc Chloride	7646-85-7	1mg/M3	1mg/M3	NE	39 %
Ammonium Chloride	12125-02-9	10mg/M3	10mg/M3	NE	
As Zinc Ammonium Chloride					

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)

## 4. FIRST AID MEASURES

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**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

## 5. FIREFIGHTING MEASURES

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**Extinguishing media:** dry chemical.

**Special fire fighting procedures:** use self sustaining respiratory suit.

**Unusual Fire and Explosion Hazards:** May release hydrochloric acid, zinc chloride, zinc oxide, ammonia, bromine, carbon monoxide, carbon dioxide, hydrobromic acid, various organic fumes.

## 6. ACCIDENTAL RELEASE MEASURES

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**Methods and materials:** Flush into chemical sewer or soak up with a suitable absorbent. Wear adequate protection as described in section 8.

**Environmental Precautions:** Avoid release to the environment. Collect spillage.

## 7. HANDLING & STORAGE

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Wash thoroughly after use. Wash contaminated clothing before reuse. Store in a closed corrosive resistant container, with corrosive resistant liner, in cool dry place. Keep out of the reach of children. Read label and SDS prior to use.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Occupational Exposure Limit Values:** See section 3.

Respiratory Protection (type): Acid mask required for fumes above TWA.

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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Boiling Point: 230 F

Specific Gravity: 1.403

Vapor Pressure (mm Hg): NE

Melting Point: NE

Vapor Density: NE

Evaporation Rate: <1 (butyl acetate=1)

Solubility in water: 100%

pH: NE

Flash Point: NE (TOC)

Flammable Limits: lel: NE uel: NE

Appearance and odor: Clear to yellow liquid, wintergreen odor.

## 10. STABILITY AND REACTIVITY

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**Stability :** STABLE Conditions to avoid : none

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

**Hazardous Decomposition or Byproducts (incomplete combustion):** Hydrochloric acid, zinc

oxide, chlorine, ammonia, zinc chloride, bromine, carbon monoxide, carbon dioxide, hydrobromic acid, various organics.

**Hazardous Polymerization:** WILL NOT OCCUR Conditions to avoid: none

## 11. TOXICOLOGICAL INFORMATION

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**Routes of entry:** Inhalation: yes Skin: yes 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

## 12. ECOLOGICAL INFORMATION

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**Toxicity:** NE

**Bio-accumulative Potential:** NE

**PBT & vPvB Assessment:** NE

**Persistence & Degradability:** NE

**Mobility in Soil:** NE

**Other Adverse Effects:** NE

## 13. DISPOSAL CONSIDERATIONS

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**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.

## 14. TRANSPORT INFORMATION

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**DOT Classification:** UN 1760 , Corrosive Liquid NOS (Contains Hydrobromic acid & Ethylenediamine), 8, PG II

**Marine Pollutant:** NE

## 15. REGULATORY INFORMATION

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NFPA Classification (NFPA 325M, 8<sup>th</sup> edition)(Health, Flammability, Reactivity): 2-0-0

This product can expose you to chemicals including ethylene oxide, which is known to the state of California to cause cancer and/or birth defects or reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## 16. OTHER INFORMATION

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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 there within; 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.

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NE = not established NA = not applicable

Form 303.130 Rev.E