

**MATERIAL SAFETY DATA SHEET**

**SECTION 1**

**PRODUCT AND COMPANY IDENTIFICATION**

Trade Name: OATEY #11 LIQUID FLUX  
Product No.: 30106  
Product Use: Flux with strong cleaning agent.  
Formula: See Section 2  
Synonyms: Flux for Soldering  
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>  
Oatey Phone Number: (216) 267-7100 or (800) 321-9532  
Emergency Phone Numbers: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.  
Prepared By: Technical Department  
Preparation Date: May 1, 2009

**SECTION 2**

**COMPOSITION/INFORMATION ON INGREDIENTS**

<u>INGREDIENTS:</u>	<u>% wt/wt:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>
Water	40 - 60%	7732-18-5	None Established	None Established
Zinc Chloride	30 - 40%	7646-85-7	1 mg/m3(fume) 2 mg/m3 STEL	1 mg/m3(fume)
Hydrochloric Acid	10 - 20%	7647-01-0	2 ppm Ceiling	5 ppm Ceiling
Ammonium Chloride	4 - 10%	12125-02-9	10 mg/m3 (fume) 20 mg/m3 STEL	None Established
Tergitol	< 1	Unknown	None Established	None Established

**SECTION 3**

**HAZARDS IDENTIFICATION**

**Emergency Overview:**

Yellow paste with a slight odor. Cause burns to the eye and skin. Inhalation of fumes may cause respiratory irritation, metal fume fever, chills, nausea and vomiting. Swallowing may cause burns to the mouth or throat, vomiting, diarrhea and kidney or liver disorders. Harmful or fatal if swallowed. Symptoms may be delayed.

OSHA Hazard Classification: Corrosive, target organ effects

**SECTION 4**

**FIRST AID MEASURES**

CALL 1-877-740-5015 or 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing. Wash thoroughly with soap and water. Call a physician or poison control center if irritation persists.  
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.  
Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.  
Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

**SECTION 5 FIRE FIGHTING MEASURES**

Flashpoint / Method: Not applicable  
Flammability: LEL = Not applicable, UEL = Not applicable  
Extinguishing: Material will not burn.  
Media:  
Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.  
Unusual Fire and Explosion: None known.  
Hazards:  
Hazardous: Hydrogen chloride, zinc fumes, ammonia, nitrogen oxides.  
Decomposition  
Products:

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Spill or Leak: Ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment.  
Procedures: Take up spill with sand, earth or other absorbent material and place into a clean, dry leak-proof container.

**SECTION 7 HANDLING AND STORAGE**

Handling: Do not get in eyes. Do not get on skin or clothing. Do not take internally. Avoid breathing vapors or fumes. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed when not in use. Handle with care. Keep out of reach of children.  
Storage: Store in original, labeled container.  
Other: Containers, even empty will retain residue and may be harmful.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

Ventilation: Good general ventilation (equivalent to outdoors) should be adequate for normal use. For operations where the TLV may be exceeded, mechanical ventilation such as local exhaust may be needed to maintain exposure levels below applicable limits.  
Respiratory Protection: For operations where the TLV may be exceeded, a NIOSH approved particulate respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.  
Skin Protection: Wear rubber gloves.  
Eye Protection: Safety glasses with sideshields or safety goggles.  
Other: Eye wash and safety shower should be available.

**SECTION 9                      PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point:            208 Degrees F (97 Degrees C)  
Melting Point:           Not determined  
Vapor Pressure:          Not determined  
Vapor Density:           (Air = 1) Greater than 1  
Volatile Components:   60 - 65%  
Solubility In Water:     Soluble  
pH:                        2 to 3  
Specific Gravity:        1.14 @ 20 Degrees C  
Evaporation Rate:       Not determined  
Appearance:             Yellow Liquid  
Odor:                     Very little odor  
Will Dissolve In:        Water  
Material Is:              Liquid

**SECTION 10                   STABILITY AND REACTIVITY**

Stability:                Stable.  
Conditions To Avoid:    None.  
Hazardous                Hydrogen chloride, zinc fumes, ammonia, nitrogen oxides.  
Decomposition  
Products:  
Incompatibility/         Strong oxidizing agents, potassium, cyanides and sulfides.  
Materials To Avoid:  
Hazardous                Will not occur.  
Polymerization:

**SECTION 11                   TOXICOLOGICAL INFORMATION**

Inhalation:              Fumes from heated product may be corrosive to mucous membranes and the respiratory system. Fumes may cause burning sensation, coughing, wheezing, shortness of breath, cyanosis, fever, chills, muscular pain, anemia, metallic taste in the mouth, headache, nausea, vomiting, sweating, diarrhea and pulmonary edema. Repeated inhalation of fumes may cause occupational asthma. Symptoms may be delayed.  
Skin:                     Contact will cause burns.  
Eye:                      Vapors or fumes may cause redness, pain, blurred vision and corneal damage. Direct contact will cause burns and eye damage with possible blindness. Symptoms may be delayed.  
Ingestion:               May cause burns to the mouth and throat, nausea, vomiting or diarrhea. Death may occur from strictures of the esophagus and pylorus. Symptoms may be delayed.  
Toxicity Data:           Hydrochloric acid: Inhalation rat LC50: 3,124 ppm  
                              Zinc Chloride:        Oral rat LD50: 350 mg/kg  
                              Ammonium Chloride: Oral rat LD50: 1,650 mg/kg  
Sensitization:           None of the components are known to cause sensitization.  
Carcinogenicity:        None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA.  
Mutagenicity:           None of the components have been found to be mutagenic.  
Reproductive  
Toxicity:                None of the components are known to cause adverse reproductive effects.  
Medical  
Conditions               Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.  
Aggravated By  
Exposure:

**SECTION 12 ECOLOGICAL INFORMATION**

No data available.

**SECTION 13 DISPOSAL CONSIDERATIONS**

Waste Disposal: Dispose of in accordance with federal, state, and local regulations.  
It is the responsibility of the end-user to determine at the time of disposal of the product.

RCRA Hazardous Waste Number: None  
EPA Hazardous Waste ID Number: D002  
EPA Hazard Waste Class: Corrosive

**SECTION 14 TRANSPORT INFORMATION**

DOT

Proper Shipping Name: Corrosive Liquid, nos  
Hazard Class/Packing Group: 8, PG III  
UN/NA Number: UN1760  
Hazard Labels: Corrosive

IMDG

Proper Shipping Name: Corrosive Liquid, nos  
Hazard Class/Packing Group: 8, PG III  
UN Number: UN1760  
Label: Corrosive

2004 North American Emergency Response Guidebook Number: 154

**SECTION 15 REGULATORY INFORMATION**

Hazard Category for Section 311/312: Acute Health, Chronic Health

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<u>Chemical</u>	<u>CAS #</u>	<u>% wt</u>
Zinc Chloride	7646-85-7	30-35%
Hydrochloric acid	7647-01-0	12-15%

CERCLA 103 Reportable Quantity: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Zinc Chloride (35% max) of 1,000 lbs, is 2,857 lbs.

<u>Chemical</u>	<u>CAS #</u>	<u>RQ, lbs.</u>
Zinc Chloride	7646-85-7	1,000
Ammonium Chloride	12125-02-6	5,000

California Proposition 65: Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

TSCA Inventory: This product does not contain chemicals regulated under California Proposition 65.

Canadian WHMIS Classification: All of the components of this product are listed on the TSCA inventory.

Class E; Class D, Division 2, Subdivision B  
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**SECTION 16**                      **OTHER INFORMATION**

NFPA and HMIS:

NFPA Hazard Signal: Health: 3    Flammability: 0    Reactivity: 0    Special: None

HMIS Hazard Signal: Health: 3\*    Flammability: 0    Reactivity: 0    PPE: B

**Disclaimer:**

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.