

MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY H-20-95[®] WATER SOLUBLE TINNING FLUX
Product Use: Water soluble tinning flux
Formula: See Section 2
Synonyms: Flux for Copper Pipe
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 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By: Corporate Director - Safety and Environmental Compliance
Preparation Date: June 10, 2005

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>	<u>OTHER:</u>
Surfactant Blend (Non-hazardous)	20 - 40%	Not Available	None Established	None Established	None
Inert Fillers (Non-hazardous)	20 - 35%	Not Available	None Established	None Established	None
Triethanolamine Hydrochloride	6 - 12%	637-39-8	None Established	None Established	None
Tin	4 - 8%	7440-31-5	2 mg/m3	None	None
Zinc Chloride	2 - 8%	7646-85-7	1 mg/m3 (fume) 2 mg/m3 STEL	1 mg/m3 (fume)	None
Ammonium Chloride	1 - 5%	12125-02-9	10 mg/m3 (fume) 20 mg/m3 STEL	None Established	None
Copper	0 - 1%	7440-50-8	0.2 mg/m3 (fume)	0.1 mg/m3 (fume)	None
Bismuth	0 - 1%	7440-69-9	None Established	None Established	None

OSHA Hazard Classification: Irritant, target organ effects

SECTION 3

HAZARDS IDENTIFICATION

Emergency Overview:
White paste with a slight odor. May cause severe irritation to the eye and skin. Inhalation of fumes may cause respiratory irritation, fever, chills, nausea or vomiting. Swallowing may cause severe irritation to the mouth or throat, vomiting, diarrhea and kidney or liver disorders. May be harmful if swallowed. Symptoms may be delayed.

SECTION 4

FIRST AID MEASURES

CALL 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: Remove contact lenses if any. Rinse eyes with water for 15 minutes. Get immediate medical attention.

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: Small Fires: Use dry chemical, CO2, water, or foam extinguisher
Media: Large Fires: Evacuate area and call Fire Department immediately
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 Decomposition: Hydrogen chloride, zinc fumes, ammonia, smoke, carbon monoxide, carbon dioxide and nitrogen oxides.
Products:

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment. Take up spill with sand, earth or other absorbent material and place into a clean, dry leak-proof container. See Section 13 for disposal information.

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/MSHA 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: Not applicable
Melting Point: Not applicable
Vapor Pressure: Not determined
Vapor Density: (Air = 1) Greater than 1
Volatile Components: 7-10%
Solubility In Water: Soluble
pH: Not determined
Specific Gravity: Not determined
Evaporation Rate: Not determined
Appearance: White Paste
Odor: Very little odor
Will Dissolve In: Water
Material Is: Paste

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: None.
Hazardous Hydrogen chloride, zinc fumes, ammonia, smoke, carbon monoxide,
Decomposition carbon dioxide and nitrogen oxides.
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. Fumes
may cause stannosis, a mild benign pneumoconiosis. Repeated
inhalation of fumes may cause occupational asthma. Symptoms may be
delayed.
Skin: Contact may cause severe irritation, ulcerations, or dermatitis.
Symptoms may be delayed.
Eye: Vapors or fumes may cause redness, pain, blurred vision and
corneal damage. Direct contact may cause severe irritation and
eye damage with possible blindness. Symptoms may be delayed.
Ingestion: May cause severe irritation 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: Triethanolmine Hydrochloride: No data available.
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 present at greater than 1% 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 None of the components are known to cause adverse reproductive
Toxicity: effects.
Medical Persons with pre-existing skin, lung, kidney or liver disorders
Conditions 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: Not regulated
Hazard Class/Packing Group: Not regulated
UN/NA Number: Not regulated
Hazard Labels: Not regulated

IMDG

Proper Shipping Name: Not regulated
Hazard Class/Packing Group: Not regulated
UN Number: Not regulated
Label: Not regulated

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/wt</u>
Zinc Chloride	7646-85-7	2-8%
Copper	7440-50-8	0-1%

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 (8% maximum) of 1,000 lbs, is 12,500 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

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

TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

Canadian WHMIS Classification: 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: 2 Flammability: 0 Reactivity: 0 Special: None
HMIS Hazard Signal: Health: 2* Flammability: 0 Reactivity: 0 PPE: B

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