

MATERIAL SAFETY DATA SHEET

S.A. Day urges each customer or recipient of the MSDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary, to use and understand the data contained in this MSDS.

To promote safe handling, each customer and recipient should notify its employees, agents, contractors and others whom it believes will use this material or the information in this MSDS and any other information regarding hazards or safety related to the safe handling and use of this product.

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Date Prepared: 3/1/2000

Updated: 3/3/2003

Product: Tube Mill Flux 7114J/4.24X

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Tube Mill Flux
Product Description: Flux
Product Code: 7114J/4.24X

MANUFACTURER:
The S.A. Day Mfg. Co., Inc.
1489 Niagara Street
Buffalo, NY 14213
716-881-3030

24 HR. EMERGENCY TELEPHONE NUMBERS:
CHEMTREC: 800-424-9300
Emergency Contact: Chemtrec
Emergency Phone: 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS No.</u>	<u>Exposure Limits</u>
Hydrochloric Acid	7647-01-0	TLV 3 ppm (C) PEL 5 ppm (C)
Hydrobromic Acid	10035-10-6	TLV 3 ppm (C) PEL 3 ppm (TWA)
2-butoxyethanol	111-76-2	TLV 20 ppm (S) PEL 50 ppm (S) MFR 100 ppm (C)

3. HAZARDS IDENTIFICATION

Emergency Overview:

Immediate Concerns: Harmful or fatal if swallowed. May cause severe and permanent eye and skin damage. May cause severe respiratory tract, nose and throat irritation if breathed.

Potential Health Effects

Eyes Contact: May cause severe eye irritation. Permanent loss of sight may result.

Skin Contact: May cause severe skin irritation and skin burns if not washed off immediately. Liquid material may be absorbed through the skin in harmful amounts.

Inhalation: May cause severe irritation of the nose and throat, headache, dizziness, incoordination, nausea, vomiting, and drowsiness. Breathing of high concentrations may cause damage to the respiratory tract and lung. Death may result from gross overexposure. Pulmonary edema and pneumonia may be delayed results of heavy vapor exposures.

Ingestion: Swallowing may be fatal.

Signs and Symptoms of Overexposure: Tearing or burning sensation of the eyes. Tingling and burning sensation on the skin. Severe nose and throat irritation, coughing and difficulty breathing.

Effects of Repeated Overexposure: Reports have associated prolonged and repeated occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Significant Laboratory Data with Possible Relevance to Human Health Hazard Evaluation: 90 day subchronic inhalation studies of 2-butoxyethanol at 77 ppm exposures to rats resulted in blood damage. At 25 ppm no effects were observed. Teratology studies on rats exposed to 300 ppm of 2-butoxyethanol resulted in maternal and embryo lethality. At 200 ppm and 100 ppm maternal, embryo and fetotoxicity were observed. No effects were observed at 50 ppm.

4. FIRST AID MEASURES

Eyes: Flush eyes with water for at least 15 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye/lid tissue. Get immediate medical attention.

Skin: Flush immediately with water for at least 15 minutes while removing contaminated clothing. Get immediate medical attention. Wash contaminated clothing before reuse. Destroy contaminated shoes.

Ingestion: If patient is fully conscious, give large amounts of water or milk. Do not induce vomiting. Call a Poison Control Center, Hospital Emergency Room or doctor immediately.

Breathing: Remove victim to fresh air. If breathing has stopped, perform artificial respiration. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint and Method: >230 deg F (open cup)

Flammable Limits: Unknown.

Autoignition Temperature: Unknown.

Flammable Class: IIIA

Extinguishing Media: Use water spray, fog, foam, CO₂ or other agents as appropriate for surrounding fire.

Hazardous Combustion Products: Burning, including when heating by welding, will produce hydrogen chloride, hydrogen bromide, phosgene, and carbon monoxide.

Fire Fighting Procedures: Wear self-contained breathing apparatus and full protective clothing. Move exposed containers from the fire area if it can be done without risk. Use water to keep fire-exposed containers cool; do not get water inside containers.

Unusual Fire and Explosion Hazards: During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

6. ACCIDENTAL RELEASE MEASURES

General Procedures: Wear suitable protective equipment. Contain spill in order to prevent contamination of sewage system or water way. Cover with lime and/or soda ash to neutralize. Use only non-sparking tools. Carefully sweep up material and place in suitable labeled containers for disposal. Wash spilled area with water after pickup is complete, collecting all pick-up water for appropriate disposal. All spill response should be carried out in accordance with Federal, State and local requirements.

Special Protective Equipment: Wear self-contained breathing apparatus and full protective clothing at all times where there is a possibility of contact with the liquid, vapor or gases from this product.

7. HANDLING AND STORAGE

General Procedures: Do not breathe vapors. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Store away from heat and oxidizing agents. Keep containers in a dry and well ventilated area. Keep containers tightly closed. Protect containers from damage. Emptied containers may contain vapor and product residue. Do not weld, braze or cut on emptied containers. Emptied containers must not be washed and reused for any purpose. Never use pressure to empty a drum. Drum is not a pressure vessel.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Personal Protection:

Eyes and Face: Wear safety spectacles and chemical goggles. Do not wear contact lenses.

Skin: Wear impervious rubber gloves and clothing designed to prevent skin contact.

Respiratory: Wear a properly fitted NIOSH/MSHA approved organic vapor/acid gas cartridge respirator if misting occurs or vapor is present, and if there is a potential for airborne exposures to exceed established exposure limits. Consult respirator manufacturer to determine appropriate equipment. If concentrations are high or unknown, wear self-contained breathing apparatus. Refer to OSHA 29CFR1910.134 "Respiratory Protection".

Work Hygiene Practices: Local exhaust ventilation must be used to control vapors to a level below allowable exposure limits (See Section II). Wash thoroughly after handling.

Other Use Precautions: Wear tinted goggles or full face shield to protect against infrared radiation from the torch flame and hot metal. All filter lenses and plates shall meet the test for transmission of radiant energy prescribed in ANSI Z87.1-1968-American National Standard Practice for Occupational and Educational Eye and Face Protection. The high temperatures normally found in brazing processes will generate fumes. These fumes will contain vaporized metals and metallic oxides of the metals contained in the brazing material and substrate, and halogenated compounds from the brazing flux. Repeated overexposure to metal fumes may cause metal fume fever, characterized by cough, dyspnea, fever, chills, substernal chest pain, muscular pain, nausea and vomiting. Metal fume fever is temporary with recovery in 24 - 48 hours, and is without medical sequelae.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear, colorless liquid
pH: < 1
Percent Volatile:
Vapor Pressure:
Vapor Density:
Boiling Point:
Melting Point:
Solubility in Water: Completely miscible with water
Evaporation Rate:
Specific Gravity: 1.035
Viscosity:

10. STABILITY AND REACTIVITY

Stable: Stable under normal conditions of handling and use.

Incompatibility with other materials: Strong oxidizers, alkalis, alkali metals, metal powders, carbides, sulfides

Hazardous Polymerization: None known.

Conditions to Avoid: Keep away from heat, flame and moisture.

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Hazardous decomposition products: May release bromine or chlorine in the presence of strong oxidizers.

11. TOXICOLOGICAL INFORMATION

The toxicological properties of this mixture have not been determined. The information provided is based on the toxicological properties of the ingredients.

12. ECOLOGICAL INFORMATION

None available.

13. DISPOSAL CONSIDERATIONS

Disposal Method: Dispose of waste in accordance with all federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (Department of Transportation)

Technical Name:	Corrosive Liquid, N.O.S.
Combustion Class:	Non-Combustible
Hazard Class:	8 - Corrosive
NA/UN Number:	UN 1760
Packing Group:	II

15. REGULATORY INFORMATION

TSCA The components of this product are either on the TSCA inventory or are exempt from the inventory

California Proposition 65

<i>Carcinogen</i>	1,4-dioxane (< 0.001%) Ethylene oxide(< 0.001%) Propylene oxide (< 0.001%)
<i>Reproductive Toxin</i>	Ethylene oxide(< 0.001%)

Carcinogens:

<i>OSHA</i>	Ethylene oxide (< 0.001%)
<i>NTP</i>	1,4-dioxane (< 0.001%) Ethylene oxide (< 0.001%)

Propylene oxide (< 0.001%)

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Carcinogens:

IARC

1,4-dioxane (< 0.001%)

Ethylene oxide (< 0.001%)

Propylene oxide (< 0.001%)

16. OTHER INFORMATION

HMIS Ratings:

Health: 3

Flammability: 1

Reactivity: 1

Protective Equipment: To be determined by the user based on the conditions of use and the effectiveness of engineering controls in place during the handling and use of the product.