BLACK SWAN MFG. CO.

GHS SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Manufacturer:
Black Swan Mfg. Co.
4540 W. Thomas St.
Chicago, IL 60651-3318
Tel.: 800-252-5796
Fax: 773-227-3705
Web Site : www.blackswanmfg.com
E-mail : info@blackswanmfg.com

For any Transportation or Medical Chemical Emergencies call:

INFOTRAC

(800) 535-5053 **OR** (352) 323-3500

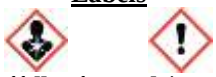
24 hours per day - 7 days a week

Product Name: Tuf-Flux

Recommended Use: To prepare copper tubing and fittings for soldering.

SECTION 2 – HAZARD(S) IDENTIFICATION

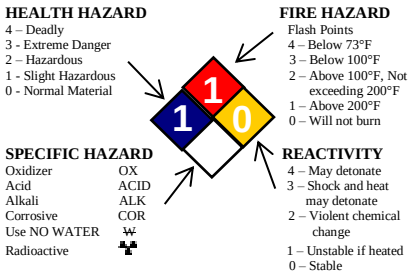
Labels



Signal Word
Warning

HMIS

NFPA



GHS Classification

Health
Acute Toxicity:Not Established
Skin Irritation: Not Established
Eye Irritation: Cat. 2A
Skin Sensitization: Yes

Environmental
Acute Aquatic Toxicity: Not Established
Chronic Aquatic Toxicity: Not Established

Physical
None

Hazardous Statements

H302: Harmful if swallowed
H315: Causes skin irritation
H319: Causes serious eye irritation

Precautionary Statements

P102: Keep out of reach of children
P262: Do not get in eyes, on skin, or on clothing
P264: Wash thoroughly after handling
P281: Use personal protective equipment as required

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemicals	CAS#	EINECS#	REACH Pre-registration Number	Approx %
ZINC CHLORIDE	7646-85-7	231-592-0	N/A	10-25%
AMMONIUM CHLORIDE	12125-02-9	235-186-4	N/A	10-25%
PETROLATUM	8009-03-08	N/A	N/A	70-90%

*Unlisted ingredients are not classified as hazardous according to OSHA 1910.1200.

SECTION 4 – FIRST-AID MEASURES

Inhalation: Move into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and call physician.
Skin: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If rash or burn appears consult a physician.
Eyes: Flush with water for 15 minutes. If irritation persists, get medical attention.
Ingestion: Get immediate medical attention. Rinse mouth. DO NOT INDUCE VOMITING.

SECTION 5 – FIRE-FIGHTING MEASURES

Fire Hazard: May release ZnO and HCI fumes. Heat may build up pressure and rupture closed containers.
Combustion Products: None known.
Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam or Water Fog.
Unsuitable Extinguishing Media: None known.
Protective Equipment: Self-contained breathing apparatus {(SCBA), MSHA/NIOSH}. Full protective gear.
Special Fire Fighting Procedures: Evacuate enclosed areas, stay upwind. Closed or confined quarters require self-contained breathing apparatus, positive pressure hose masks or airline masks. Full protective equipment required. Toxic metal halide fumes may be produced. Use water spray to cool containers, to flush spills from sources of ignition and to disperse vapors.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions: Prevent contact with skin or eyes. Do not breathe fumes. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.
Protective Equipment: Wear suitable respiratory protective equipment.
Emergency Procedures: Remove all sources of ignition and ventilate area. For leaks, stop leak if it can be done safely. Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions: Avoid runoff into storm sewers, ditches and waterways.
Methods for Cleaning Up: Contain spill, absorb, sweep-up and dispose to prevent footing hazard. Flush area to chemical sewer.

SECTION 7 – HANDLING AND STORAGE

Handling

Avoid contact with eyes and skin. Avoid prolonged breathing of vapor and mist. Use with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep products away from heat, sparks, flames and all other sources of ignition. Keep containers closed when not in use. Empty containers may contain residues; treat as if full and observe all product precautions. Do NOT reuse empty containers.

Storage

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep container closed when not in use. Keep away from heat, sparks, open flame and other sources of ignition. **Incompatible Materials**: None known.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

	Exposure Limits		
Hazardous Chemicals	**ACGIH-TLV**	**ACGIH-STEL**	**OSHA-PEL**
ZINC CHLORIDE	1 mg/m^3	N/A	1 mg/ m^3
AMMONIUM CHLORIDE	10 mg/ m^3	N/A	10 mg/ m^3
PETROLATUM	N/A	N/A	N/A

Engineering Controls: A source of running water to flush or wash the eyes and skin in case of contact. Use local exhaust as needed.
Ventilation: Local exhaust adequate.
Personal Protective Equipment – Respiratory: In confined, poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air respirators during soldering operations until fumes have dissipated.
Personal Protective Equipment – Skin: Rubber gloves and coveralls.
Personal Protective Equipment – Eyes: Safety goggles.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance: Tan/Gold
Odor: Petroleum
pH: Not Established
Melting Point: 120°F-150°F
Freezing Point: Not Established
Boiling Point: Not Established
Flash Point: >400°F (204°C)
Specific Gravity: 1.06
Solubility (H2O): Insoluble
Evaporation Rate: Not Established
Vapor Density: Not Established
VOC: 0 g/l
Vapor Pressure: <0.01@68°F (20°C)
Flammability: Not Established
Flammability Limits: LEL – Not Established
UEL – Not Established

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Conditions to avoid: None known.
Incompatible materials: None known.
Hazardous decomposition products: None known.

SECTION 11 – TOXICOLOGICAL INFORMATION

	Toxicity	
Hazardous Chemicals	**LD_{50}**	**LC_{50}**
ZINC CHLORIDE	Oral – 350 mg/kg (rat)	Inhalation – 1960 mg/m3/10m (rat)
AMMONIUM CHLORIDE	Oral – 1650 mg/kg (rat)	Inhalation – N/A
PETROLATUM	N/A	N/A

Likely Routes of Exposure: Inhalation, Skin Contact, Eye Contact and Ingestion.
Symptoms and Effect - Inhalation: Irritation to respiratory system. **Skin Contact:** May cause skin irritation. **Eye Contact:** Intense irritation to eyes and injury. **Ingestion:** Nausea, vomiting, irritation to digestive system.
Long-Term Effect: Short-term effects to liver and kidney can occur. No long-term effect known.
Pre-Existing Conditions: Existing or Chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Zinc Chloride – 7.2 ppm/96hr/medium bluegrill/TLm
Ammonium Chloride – 6 ppm/96hr/sunfish/TLm
Persistance & Degradability: None known.
Bioaccumulative Potential: None known.
Mobility in soil: In normal use, emission of Volatile Organic Compounds (VOC's) to the air takes place, typically at a rate of 0 g/l.

SECTION 13 – DISPOSAL CONSIDERATION

Dispose of product or container in accordance with federal, state or local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

D.O.T. (U.S.): Not Regulated.

SECTION 15 – REGULATORY INFORMATION

Precautionary Label Information: Irritant and Health Hazard.
Risk Phrases: R22-Harmful if swallowed. **R41**-Risk of serious damage to eyes.
Safety Phrases: S2-Keep out of reach of children. **S9-**Keep container in a well-ventilated place. **S16-**Keep away from sources of ignition-No smoking. **S25-**Avoid contact with eyes. **S26-**In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

SECTION 16 – OTHER INFORMATION

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. Black Swan Mfg. Co. urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents and contractors of the information on the sheets. **DATE: 01/01/2019**

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