# 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: Tin-O-Flux**

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

## SECTION 2 – HAZARD(S) IDENTIFICATION

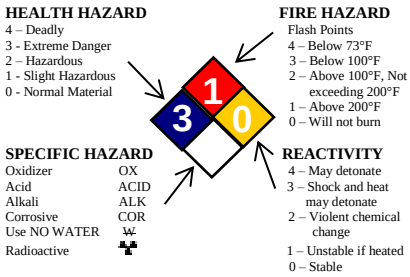
### Labels


### Signal Word

Warning

### HMIS


### NFPA




### GHS Classification

**Health**
Acute Toxicity: Cat. 4
Skin Irritation: Not Established
Eye Irritation: Cat. 2A
Skin Sensitization: NO

**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 | 15-25% |
| AMMONIUM CHLORIDE | 12125-02-9 | 235-186-4 | N/A | 1-5% |
| TIN | 7440-31-5 | N/A | N/A | % |
| COPPER | 7440-50-8 | N/A | N/A | % |
| PETROLATUM | 8009-03-8 | N/A | N/A | % |

*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.
**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**: Take up spill with sand, earth or other material and place into a clean, dry leak-proof container.

## 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/m3 | N/A | 1 mg/m3 |
| AMMONIUM CHLORIDE | 10 mg/m3 | N/A | 10 mg/m3 |
| TIN | 2 mg/m3 | N/ A | 2 mg/m3 |
| COPPER | 1 mg/m3 | N/A | 1 mg/m3 |

**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 ventilation adequate.
**Personal Protective Equipment – Respiratory:** If 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, Chemical resistant coveralls.
**Personal Protective Equipment – Eyes:** Safety glasses.

## SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

| | | | | | |
|---|---|---|---|---|---|
| **Appearance**: | Pale Gray | **Flash Point**: | Not Established | **Vapor Pressure**: | Negligible |
| **Odor**: | Low odor | **Specific Gravity**: | 1.1 @ 20°C | **Flammability**: | Not Established |
| **pH**: | Not Established | **Solubility (H2O):** | Negligible | **Flammability Limits**: | LEL – Not Established |
| **Melting Point**: | Not Established | **Evaporation Rate**: | Not Established | | UEL – Not Established |
| **Freezing Point**: | Not Established | **Vapor Density**: | >1 (air=1) | | |
| **Boiling Point**: | 638°F (337°C) | **VOC**: | 0 g/l | | |

## SECTION 10 – STABILITY AND REACTIVITY

**Stability:** Stable.
**Hazardous polymerization:** Will not occur.
**Conditions to avoid:** None known.
**Incompatible materials:** Strong oxidizing agents, potassium, cyanides and sulfides.
**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 |
| TIN | N/A | N/A |
| COPPER | N/A | N/A |

**Likely Routes of Exposure:** Inhalation, Skin Contact, Eye Contact and Ingestion.
**Symptoms and Effect - 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 mouth, headache, nausea, vomiting, sweating, diarrhea and pulmonary edema. Fumes may cause stannosis, a mild bening pneumoconiosis. Repeated inhalation of fumes may cause occupational asthma. Symptoms may be delayed. **Skin Contact:** Contact may cause irritation, ulcerations, burns or dermatitis. **Eye Contact:** Vapors or fumes may cause redness, pain, blurred vision and corneal damage. Direct contact may cause burns and eye damage with possible blindness. Symptoms may be delayed. **Ingestion:** May cause irritation or burns to the mouth and throat, nausea, vomiting or diarrhea. Death may occur from strictures of the esophagus and pylorus. Symptoms may be delayed.
**Long-term Effect:** None known.
**Pre-Existing Conditions**: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

## SECTION 12 – ECOLOGICAL INFORMATION

**Ecotoxicity:** Zinc Chloride- 7.2 ppm/96hrs/medium bluegrill/TLm
Ammonium Chloride – 6 ppm/96hrs/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:** Toxic and Health Hazard.
**Risk Phrases: R22**-Harmful if swallowed. **R36/37/38:** Irritating to the eyes, respiratory system and skin. **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: 01/01/2023**