

MATERIAL SAFETY DATA SHEET

SUPERIOR 155 BATTERY FLUX

DATE REVISED: January 1, 2011

Product Name: Superior 155 Battery Flux

Manufacturer: Superior Flux & Mfg. Co. 6615 Parkland Blvd. Cleveland, OH 44139

Emergency Phone Number: 1-800-424-9300 (CHEMTREC)

Other Information Calls: (440) 349-3000

To the Purchaser: This MSDS contains important environmental, health, and toxicology information for your employees who have ordered this product. Please be sure this information is given to them. If you resell this product, a copy of the MSDS should be given to the buyer.

H.M.I.S. INFORMATION: HEALTH = 2 FLAMMABILITY = 3 REACTIVITY = 0

SECTION I - IDENTIFICATION

Common Name: Superior 155 Battery Flux

Chemical Family: Solvent Based Battery Fabrication Flux

CAS Number: NA

Chemical Name: NA

Formula: See Below

SECTION II - COMPOSITION INFORMATION

Components	CAS Number	%	OSHA PEL
Isobutanol	78-33-13	8-48	50PPM
Hydrobromic Acid	10035-10-6	20-30	3 mg/m ³
Phosphoric Acid	7664-38-2	4-8	3 mg/m ³
Monoethanolamine	141-43-5	4-8	3 mg/m ³

Unlisted percentages are non-hazardous stabilizers, and water. None of the materials in this product are listed in NTP, IARC, or OSHA as carcinogens.

SECTION III - HEALTH HAZARDS

Primary Routes of Entry into Body: Fume inhalation, ingestion, skin, and eyes.

Symptoms of Overexposure: Irritation of eye, skin, mucous membranes, and acid stomach if ingested.

Medical Conditions Generally Aggravated by Exposure: None presently known

Chemicals Listed as Carcinogen or Potential Carcinogen: None

OSHA Permissible Exposure Limit (PEL): 3 mg/m³

ACCGIH Threshold Limit Value (TLV): 5 mg/m³

SECTION IV - EMERGENCY AND FIRST AID PROCEDURES

- Inhalation:** Remove victim to fresh air. Give artificial respiration if not breathing.
- Ingestion:** Do not induce vomiting. Rinse mouth; give large quantities of water to dilute the material. Get medical attention immediately.
- Eyes:** Flush with water for 15 minutes. Call a physician.
- Skin:** Remove contaminated clothing, flush skin with plenty of water for at least 15 minutes.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

- Flash Point:** 295°C
- Flammable Limits:** Lower 2, Upper 12.7
- Extinguishing Media:** Water, CO₂, dry chemical
- Auto Ignition Temperature:** None
- Unusual Fire and Explosion Hazards:** Will release small amounts of HBr.
- Special Fire Fighting Procedures:** Flammable liquid and vapors may travel great distances to ignition source and flash back.

SECTION VI - ACCIDENTAL RELEASE MEASURES

- Steps to be Taken in Case Material is Spilled:** Soak up with absorbent, eliminate source of ignition. Remove residue with detergent and water.

SECTION VII - HANDLING AND STORAGE

- Storage Requirements:** Store in a cool dry place. Keep container closed when not in use. Handle as a flammable/corrosive liquid.
- Handling Requirements:** Safe precautionary use to prevent spills and exposure to skin or fumes.
- Other Precautions: None

SECTION VIII - CONTROL MEASURES

- Respiratory Protection (TYPE):** NIOSH approved respirator.
- Ventilation:** Yes
- Mechanical (General):** Explosion proof
- Local Exhaust:** Yes
- Protective Gloves:** Recommended, NIOSH approved
- Other Protective Clothing or Equipment:** Rubber apron is recommended.
- Eye Protection:** Safety Glasses
- Regulatory Information:** The chemical components are listed on TSCA and DSL inventory. See composition section ii for CAS numbers.

SECTION IX - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: 465°F

Specific Gravity (Water = 1): 1.05

Vapor Pressure (mmHg) : <0.05mmHg @ 25°C

Percent Volatile By Volume: 92%

Vapor Density (Air = 1): NA

Evaporation Rate (Butyl acetate = 1) : >2

Melting Point: N/A

Solubility in Water: Complete

Reactivity in Water: None

Appearance and Odor: Clear light red, alcoholic odor

SECTION X - STABILITY AND REACTIVITY

Stability: Product is stable

Conditions to Avoid: Sparks open flame or heat.

Hazardous Polymerization: Will not occur

Conditions to Avoid: None

Incompatibility: Oxidizing agents and metals.

Hazardous Decomposition Products: Carbon dioxide, and carbon monoxide

SECTION XI - TOXICOLOGICAL INFORMATION

Acute Toxicity Data

- 1) **Oral:** LD-50 (rat): Not available
- 2) **Inhalation:** LC-50 (rat): Not available
- 3) **Dermal:** LD-50 (rabbit): Not available
- 4) **Skin Irritation:** (rabbit): Not available

Chronic Toxicity Data

- 1) **Repeated Skin Application:** (rat): Not available
 - 2) **Eye Irritation:** (rabbit): Not available
-

SECTION XII - ECOLOGICAL INFORMATION

This Material has not been Tested for Environmental Effects.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with EPA regulations

SECTION XIV- TRANSPORTATION

D.O.T. Proper Shipping Name: Flammable Liquid

Hazard Class: 3

Identification Number: UN1212

Packing Group: III

Type D.O.T Label Required Information: Flammable Liquid

SECTION XV - REGULATORY INFORMATION

OSHA Hazardous Chemical According to 29 CFR 1910.1200: Isopropyl Alcohol

Carcinogenicity Classification: (Components Present at 0.1% or More)

International Agency for Research on Cancer (IARC): Not Listed

American Conference of Governmental Industrial Hygienists (ACGIH): Not Listed

National Toxicology Program (NTP): Not Listed

Occupational Safety and Health Administration (OSHA): Not Listed

All Components of this Product are Listed on the U.S. Toxic Substances Control Act Inventory or Otherwise Comply with TSCA Pre-manufacture Notification Requirements.

This Product is RoHS Compliant.

SECTION XVI - OTHER INFORMATION

DISCLAIMER: Judgments as to the suitability of information herein or the purchaser's purposes are necessarily the purchaser's responsibility. Reasonable care has been taken in the preparation of this material, but there are NO WARRANTIES, NO REPRESENTATIONS AND NO RESPONSIBILITY AS TO THE ACCURACY OR THE SUITABILITY OF THIS INFORMATION FOR ANY PURCHASER'S USE OR FOR ANY CONSEQUENCE TO USE.
