

MATERIAL SAFETY DATA SHEET

SUPERIOR NO. 601B/3411

DATE REVISED: January 1, 2014

Product Name: Superior No. 601B/3411

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 = 0 REACTIVITY = 0

SECTION I – IDENTIFICATION

Common Name: Superior No. 601B/3411

Chemical Family: Boron-modified silver brazing paste flux

CAS Number: NA

Chemical Name: NA

Formula: See below

SECTION II - COMPOSITION INFORMATION

Components	CAS Number	%	OSHA PEL
Potassium Fluoroborate	12228-71-6	20-40	2.5 mg/m ³
Potassium Tetraborate	1332-77-0	15-25	5.0 mg/m ³
Boric Acid	10043-35-3	30-45	10 mg/m ³
Potassium Fluoborate	14075-53-7	7-15	2.5 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: Salivation, coughing, choking, chills, may cause weight loss, brittle bones, anemia, and stiff joints.

Medical Conditions Generally Aggravated by Exposure: Any weakness of the lungs, kidneys or liver will be aggravated.

Chemical Listed as Carcinogen or Potential Carcinogen: None

OSHA Permissible Exposure Limit (PEL): 2.5 mg/m³

ACGIH Threshold Limit Value (TLV): 2.5 mg/m³

SECTION IV - EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove to fresh air
Eyes: Flush with water for 10 minutes. Call physician.
Skin: Wash thoroughly with water.
Ingestion: If patient is fully conscious, give two glasses of water and induce vomiting. Obtain medical attention immediately.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flash Point: (Method Used): None
Flammable Limits: Lower-NA, Upper-NA
Extinguishing Media: Not needed
Auto Ignition Temperature: None
Special Fire Fighting Procedures: Normal caution when using chemicals
Unusual Fire and Explosion Hazards: Fluorides

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is spilled: Clean up paste and flush remaining material with lots of water.

SECTION VII - HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage: Store in Plastic containers in cool area. Do not store in glass or porcelain container. Wash thoroughly after use.
Work/Hygienic Practices: Avoid contact with skin, eyes and clothing.
Other Precautions: Keep container away from excessive heat.

SECTION VIII - CONTROL MEASURES

Ventilation: Yes
Local Exhaust: Yes
Protective Gloves: NIOSH approved
Eye Protection: Safety goggles
Mechanical (General): Yes
Respiratory Protection (Type): NIOSH approved respirator.
Other Protective Clothing or Equipment: Rubber apron

SECTION IX - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: NA
Specific Gravity (Water = 1): 1.6
Vapor Pressure (mm Hg): NA
Percent Volatile by Volume: 30%
Vapor Density (Air = 1): NA
Evaporation Rate (Butyl Acetate = 1): 0.3
Melting Point: 500°C
Solubility in Water: Moderate
Reactivity in Water: None
Appearance and Odor: Black odorless paste

SECTION X - STABILITY AND REACTIVITY

Stability: Product is stable

(Conditions to Avoid): Excess heat

Incompatibility: Glass or porcelain

Hazardous Decomposition Products: Fluorides with high heat.

Hazardous Polymerization: Will not occur

(Conditions to Avoid): NA

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
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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: Non-hazardous

Hazard Class: NA

Identification Number: NA

Packing Group: NA

Type D.O.T Label Required Information: NA

Waste Disposal Method: Dispose in accordance with EPA regulations.

SECTION XV - REGULATORY INFORMATION

OSHA Hazardous Chemical According to 29 CFR 1910.1200: NA

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

International Agency for Research on Cancer (IARC): NA

American Conference of Governmental Industrial Hygienists (ACGIH): NA

National Toxicology Program (NTP): NA

Occupational Safety and Health Administration (OSHA): NA

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.

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.
