

# MATERIAL SAFETY DATA SHEET

## SUPERIOR NO. 612

DATE REVISED: January 1, 2014

**Product Name:** Superior No. 612

**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. 612

**Chemical Family:** High temperature 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	30-45	2.5 mg/m <sup>3</sup>
Sodium Tetraborate Decahydrate	1303-96-4	22-48	5.0 mg/m <sup>3</sup>
Boric Acid	10043-35-3	10-22	10 mg/m <sup>3</sup>
Aluminum Oxide	1344-28-1	2-11	15 mg/m <sup>3</sup>
Silicon Dioxide	14808-60-7	6-18	10 mg/m <sup>3</sup>

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:** Salvation, coughing, 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/m<sup>3</sup>

**ACGIH Threshold Limit Value (TLV):** 2.5 mg/m<sup>3</sup>

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## 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.

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## 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 with high heat.

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## 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.

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## 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.

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## SECTION VIII - CONTROL MEASURES

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

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## SECTION IX - PHYSICAL AND CHEMICAL CHARACTERISTICS

**Boiling Point:** NA  
**Specific Gravity (Water = 1):** 1.6  
**Vapor Pressure (mm Hg):** NA  
**Percent Volatile by Volume:** 20%  
**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:** Off-white, odorless paste

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## **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

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## **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.**

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## **SECTION XIII - DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Dispose of in accordance with EPA regulations

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## **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.

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## **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.**

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## **SECTION XVI - OTHER INFORMATION**

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.**

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