SAFETY DATA SHEET
SUPERIOR No. 20
DATE REVISED: January 1, 2018

Product Name/Part Number: Superior No. 20
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

SECTION 1 -- IDENTIFICATION
Common Name: Superior No. 20
Chemical Family: Aluminum brazing flux
CAS Number: N/A
Chemical Name: N/A
Formula: See Section 3

SECTION 2 – HAZARDS IDENTIFICATION
GHS Classification:
- Skin corrosion (Category 1B) H314
- Serious eye damage (Category 1) H318
- Acute toxicity, Oral (Category 3) H301
- Acute aquatic toxicity (Category 1) H400
- Chronic aquatic toxicity (Category 1) H410

Label Elements
- Pictogram(s):
- Signal Word: Danger

Hazard Statement(s)
- H301 Toxic if swallowed
- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage
- H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)
- P260 Do not breath dust or fumes
- P264 Wash skin thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P273 Avoid release to the environment
- P280 Wear eye protection, protective gloves and protective clothing
- P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call doctor
- P301+P310+P331: IF SWALLOWED: Immediately call a POISON CENTER if you feel unwell. Rinse mouth. Do NOT induce vomiting
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P304+P340+P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER
- P332+P313 If skin irritation occurs: get medical advice
- P337+P313 If eye irritation persists, get medical advice
- P362 Take off contaminated clothing and wash before reuse
- P391 Collect spillage
- P405 Store locked up
- P501 Dispose of contents to an approved waste disposal plant
SECTION 3 – COMPOSITION INFORMATION

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium Chloride</td>
<td>7447-41-8</td>
<td>30-45</td>
</tr>
<tr>
<td>Zinc Chloride</td>
<td>7646-85-7</td>
<td>6-10</td>
</tr>
<tr>
<td>Sodium Fluoride</td>
<td>7681-49-4</td>
<td>10-25</td>
</tr>
</tbody>
</table>

None of the materials in this product are listed in NTP, IARC, or OSHA as carcinogens.

SECTION 4 – FIRST AID MEASURES

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Inhalation:** Remove to fresh air.

**Eyes:** Flush with water for fifteen (15) Minutes. Remove contacts if present and easy to do so. Call physician.

**Skin:** Wash thoroughly with soap and water.

**Ingestion:** Rinse mouth with water. Never give anything by mouth to an unconscious person. Obtain medical attention immediately.

**Most Important Symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in section 2 (labeling).

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

**OSHA Permissible Exposure Limit (PEL):** 1 mg/m³
**ACGIH Threshold Limit Value (TLV):** 1 mg/m³

SECTION 5 – FIREFIGHTING MEASURES

**Extinguishing Media:** Dry chemical, carbon dioxide foam

**Special Hazards:** Chloride and fluoride fumes may occur with high heat.

**Flash Point:** Not applicable

**Advice for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal Precautions and Equipment:** Use personal protective equipment. See section 8 for personal protection.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so.

**In Case Material is spilled:** Neutralize with soda ash or sodium bicarbonate and dilute with water. Arrange for disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7 - HANDLING AND STORAGE

**Storage Requirements:** Store in plastic containers in cool area, away from heat

**Handling Precautions:** Avoid contact with skin and eyes. Provide appropriate and adequate ventilation for or fumes when using this product.

For precautions see Section 2
SECTION 8 - CONTROL MEASURES

Respiratory Protection: For nuisance exposures use type P95 (US) respirator. For higher level protection use type OV/AG/P99 respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Ventilation: Yes  Mechanical (General): Yes  Local Exhaust: Yes

Protective Gloves: Yes – Nitrile rubber. Use equipment tested and approved under NIOSH standards.
Eye Protection: Safety glasses conforming to EN166. Use equipment tested and approved under NIOSH standards.

Other Protective Clothing or Equipment: Rubber apron recommended.
These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of the anticipated use. It should not be construed as offering an approval for any specific use scenario.

SECTION 9 - PHYSICAL AND CHEMICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Powder, white</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/Freezing Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid/gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
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</tr>
<tr>
<td>Vapor Pressure</td>
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</tr>
<tr>
<td>Vapor Density</td>
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</tr>
<tr>
<td>Relative Density</td>
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</tr>
<tr>
<td>Bulk Density</td>
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</tr>
<tr>
<td>Water Solubility</td>
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</tr>
<tr>
<td>Partition coefficient:</td>
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</tr>
<tr>
<td>n-octanol/water</td>
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</tr>
<tr>
<td>Auto-ignition Temperature</td>
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</tr>
<tr>
<td>Decomposition Temperature</td>
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</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
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<tr>
<td>Explosive Properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10 - STABILITY AND REACTIVITY

Reactivity: Exothermic in water
Stability: Product is stable under recommended storage conditions
Possibility of hazardous reactions: No data available
Conditions to Avoid: Excessive heat, excessive cold, metals
Incompatibility: Alkalines, strong oxidizing or reducing materials, cyanides or combustible materials.

Hazardous Decomposition Products: Hydrochloric acid, zinc chloride, zinc oxide
In the event of fire: See Section 5
SECTION 11 - 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 12 - ECOLOGICAL INFORMATION

This material has not been tested for environmental effects.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material

SECTION 14- TRANSPORTATION

D.O.T. Proper Shipping Name: Corrosive solids, N.O.S. (contains zinc chloride, anhydrous)
Identification Number: UN1759
Hazard Class: 8
Type D.O.T Label Required Information: Corrosive
Packing Group: III

SECTION 15 - REGULATORY INFORMATION

OSHA Hazardous Chemical According to 29 CFR 1910.1200: None

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

None of the 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 16 - OTHER INFORMATION

Full text of H-Statements and P-Statements referred to in Section II and/or III.

H301 Toxic if swallowed
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

HMIS Rating
Health 3
Flammability 0
**Further information:**
Judgments as to the suitability of information herein or the purchaser's purposes are necessarily the purchaser's responsibility. The above information does not represent any guarantee of the properties of the product. It is believed to be correct, but does not purport to be all inclusive and should be used only as a guide. Reasonable care has been taken in the preparation of this material, and is based on the present state of our knowledge.

Superior Flux & Mfg. Co. shall not be held liable for any damage resulting from handling or from contact with the above product.

**Preparation information**
Superior Flux & Mfg. Co.
440-349-3000

Version 2.1
Revision Date: 06/23/2017