SAFETY DATA SHEET
SUPERIOR NO. 78

DATE REVISED: January 1, 2024

SECTION 1 -- IDENTIFICATION

Product Name/Part number: Superior No. 78
Recommended use: Soft Soldering Flux
Manufacturer: Superior Flux & Mfg. Co.
6615 Parkland Blvd
Cleveland OH, 44139
Mfg. Phone No. (440) 349-3000
Emergency Phone No.: 1-800-424-9300 (CHEMTREC)

SECTION 2 – HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with OSHA HCS (29 CFR 1910)

Acute toxicity, Oral (Category 4)	H302
Skin corrosion (Category 1B)	H314
Serious eye damage (Category 1)	H318
Acute aquatic toxicity (Category 1)	H400
Chronic aquatic toxicity (Category 1)	H410

See below for full text of H-Statement

GHS Label Elements, including precautionary statements

Pictogram(s):

Signal Word: Danger

Hazard Statement(s)

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

**May be omitted from label due to presence of stronger statement.

Precautionary statement(s)

P260	Do not breath mist, fumes, or vapors
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 protective gloves/protective clothing/eye protection/face protection
P301+P312+P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340+P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor
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 POISON CENTER/doctor

P363 Wash contaminated clothing before reuse.
P391 Collect spillage
P405 Store locked up
P501 Dispose of contents and/or container to an approved waste disposal plant

Hazards not otherwise classified or not covered by GHS: None

SECTION 3 – COMPOSITION INFORMATION

Components	CAS Number	%
Zinc Chloride	7646-85-7	25-40
Ammonium Chloride	12125-02-9	4-10
Hydrochloric Acid	7647-01-0	2-8

SECTION 4 – FIRST AID MEASURES

Description of first aid measures

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

Inhalation: If breathed in, move to fresh air. If not breathing, give artificial respiration. Consult a physician.

Eyes: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

Skin: Wash off with soap and plenty of water. Consult a physician.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most Important Symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2 (labeling)

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA

Flammable Limits: NA

Extinguishing Media: Dry chemical, CO_2 foam

Auto Ignition Temperature: None

Special Fire Fighting Procedures: Normal cautions when dealing with chemicals.

Unusual Fire and Explosion Hazards: Will release small amounts of HCl upon decomposition

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. *See section 8 for personal protection.*

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

In Case Material is spilled: First neutralize with soda ash or sodium bicarbonate, dilute with water and dispose of in accordance with EPA regulations.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes.

For full precaution statements see Section 2

Storage Requirements: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

OSHA Permissible Exposure Limit (PEL): 5 mg/m^3

ACGIH Threshold Limit Value (TLV): 5 mg/m^3

Engineering Controls: Use local exhaust ventilation to maintain air concentrations of vapors and fumes below occupational exposure standards.

Special Engineering Control Needs: NA

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (USA) or ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested an approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protective Gloves: Handle with gloves. (Nitrile Rubber recommended) Gloves must be inspected prior to use. Use proper glove removal techniques (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good lab practices. Wash and dry hands after handling.

Eye Protection: Use tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (USA) or EN 166 (EU)

Body Protection: Complete suit protecting against chemical, flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation

of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

SECTION 9 - PHYSICAL AND CHEMICAL CHARACTERISTICS

Appearance	Yellow/Green Gel
Odor	None
Odor threshold	No data available
pH	0 – 1.00 @ 20-25ºC
Melting point/Freezing point	0ºC / 32ºF
Initial boiling point and boiling range	104ºC / 220ºF
Flash point	No data available
Evaporation rate (Butyl Acetate = 1)	0.6
Flammability (Solid, gas)	No data available
Upper flammability or explosive limits	No data available
Lower flammability or explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	1.300 (Water = 1)
Solubility(ies)	Soluble in water
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity: No data available
Stability: Product is stable under recommended storage conditions
Possibility of hazardous reactions: No data available
Conditions to Avoid: Metals
Incompatibility: Alkaline, strong oxidizers or reducers, cyanides or combustible materials
Hazardous Decomposition Products HCl, zinc chloride, zinc oxide, ammonium
In the event of fire: See Section 5

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Route(s) of Exposure: Inhalation, ingestion, skin and eye contact
Symptoms (Immediate and Chronic) from
Acute Exposure No data available
Prolonged or Repeated Exposure No data available
Measure(s) of toxicity
No data available
Is this chemical listed in the National Toxicology Program (NTP) Report on Carcinogens?
No data available
Is this chemical found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs or by the Occupational Safety and Health Administration (OSHA) No data available

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Other adverse effects **Hazard to ozone layer:** No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods

Product Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging Dispose of as unused product.

SECTION 14- TRANSPORTATION

D.O.T. (USA)

Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Zinc Chloride, Hydrochloric Acid)

Identification Number: UN3264

Hazard Class(es): 8, Corrosive

Packing Group: III

Marine Pollutant? Yes

IATA

Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Zinc Chloride, Hydrochloric Acid)

Identification Number: UN3264

Hazard Class(es): 8, Corrosive

Packing Group: III

IMDG

Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Zinc Chloride, Hydrochloric Acid)

Identification Number: UN3264

Hazard Class(es): 8, Corrosive

Packing Group: III

SECTION 15 - REGULATORY INFORMATION

SARA 302 Components No Chemicals in this material are subject to the reporting requirement of SARA Title III, Section 302.

SARA 313 Components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302 Components Acute Health Hazard, Chronic Health Hazard

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

THIS PRODUCT IS ROHS 10 COMPLIANT

SECTION 16 - OTHER INFORMATION

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.

Reference(s):
SigmaAldrich – SDS for Product Zinc Chloride

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