

MATERIAL SAFETY DATA SHEET

SUPERIOR NO. 460

DATE REVISED: January 1, 2014

Product Name: Superior No. 460

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. 460

Chemical Family: Organic acid, chloride activated flux

CAS Number: NA

Chemical Name: NA

Formula: See below

SECTION II - COMPOSITION INFORMATION

Components	CAS Number	%	OSHA PEL
Ammonium Chloride	12125-02-9	10-25	NA
Hydrochloric Acid	7647-01-0	1-5	5 mg/m ³
Monoethanolamine	141-43-5	1-5	3 mg/m ³
Hydroxyacetic Acid	9-14-1	10-25	NA

Unlisted percentages are non-hazardous stabilizers, activators, 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 gastrointestinal tract.

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): 3 mg/m³

SECTION IV - EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove victim to fresh air

Ingestion: Drink water or milk and get medical attention immediately.

Eyes: Flush with water for 10 minutes. Call a physician.

Skin: Wash thoroughly with water.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA

Flammable Limits in Air % By Volume: NA

Extinguishing Media: CO₂, dry chemical

Auto Ignition Temperature: None

Unusual Fire and Explosion Hazards: None

Special Fire Fighting Procedures: None

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is spilled: Absorb spill with sawdust or wood shavings and remove in accordance with EPA regulations

SECTION VII - HANDLING AND STORAGE

Storage Requirements: Plastic containers in a cool dry place when not in use.

Handling Requirements: Safe precautionary use to prevent spills and exposure to skin. Keep away from oxidizing agents.

Other Precautions: None

SECTION VIII - CONTROL MEASURES

Respiratory Protection (TYPE): NIOSH approved respirator.

Ventilation: Yes

Mechanical (General): Yes

Local Exhaust: Yes

Eye Protection: Safety glasses

Protective Gloves: Recommended, NIOSH approved

Other Protective Clothing or Equipment: Rubber gloves and an apron

SECTION IX - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: ~112°C/234°F

Specific Gravity (Water = 1): 1.09

Vapor Pressure (mmHg): Nil

Percent Volatile By Volume: 71%

Vapor Density (Air = 1): NA

Evaporation Rate (Butyl acetate = 1): NA

Melting Point: ~ 10°C/50°F

Solubility in Water: Unlimited

Reactivity in Water: None

Appearance and Odor: Clear red liquid, slight odor

SECTION X - STABILITY AND REACTIVITY

Stability: Product is stable

Conditions to Avoid: None

Hazardous Polymerization: None

Conditions to Avoid: Extreme heat

Incompatibility: Oxidizing agents and metals.

Hazardous Decomposition Products: HCl, ammonium, nitrogen products, CO, CO₂ (above 260°C/500°F)

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: Corrosive Liquid, NOS (Contains Hydroxyacetic Acid, Hydrochloric Acid)

Hazard Class: 8

Identification Number: UN1760

Packing Group: III

Type D.O.T Label Required Information: Corrosive

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.

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.