

SAFETY DATA SHEET

SUPERIOR NO. 155

DATE REVISED: January 1, 2016

Product Name: Superior No. 155

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 = 3 REACTIVITY = 0

SECTION I - IDENTIFICATION

Common Name: Superior No. 155

Chemical Family: Solvent Based Battery Fabrication Flux

CAS Number: NA

Chemical Name: NA

Formula: See below

SECTION II – HAZARDS IDENTIFICATION

Classification of Substance or Mixture:

Classification (CLP): Corrosive

Label Elements (CLP): No Data Available



Irritant

Flammable

Corrosive

Precautionary Statements: P234, P260, P261, P264, P271, P280, P303+P361+P353, P310, P305+P351+P338, P390, P363, P301+P330+P331, P304+P340

Risk Phrases: R20/21/22, R34, R37

Safety Phrases: S26, S36/37/39, S45

See section XVI for full text description of S and R phrases

Other Hazards: None if used properly

SECTION III- COMPOSITION INFORMATION

Components	CAS Number	%	OSHA PEL	H Phrases
Hydrobromic Acid	10035-10-6	20-30	3 mg/m ³	H314, H335, H290
Monoethanolamine	141-43-5	4-8	3 mg/m ³	H314, H335, H227 H312, H332, H302
Phosphoric Acid	7665-38-2	4-8	NA	H302, H313, H314, H330
Isobutanol	78-33-13	8-48	50PPM	H226, H319, H335, H336

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 IV - HEALTH HAZARDS

Primary Routes of Entry: Fume inhalation, ingestion, skin, and eyes.

Signs and Symptoms of Exposure:

1) **Acute Effects:** Reddening of eyes and skin, acid stomach if ingested, inhalation may cause respiratory tract irritation.

2) **Chronic Effects:** No specific information available

Medical Conditions Generally Aggravated by Overexposure: None presently known.

Chemical Listed as a Carcinogen or Potential Carcinogen: None

OSHA Permissible Exposure Limit (PEL): 5 mg/m³

ACGIH Threshold Limit Value (TLV): 5 mg/m³

EMERGENCY AND FIRST AID PROCEDURES

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

Skin: Wash thoroughly with water.

Inhalation: Remove to fresh air or administer oxygen. Call a physician.

Ingestion: If patient is fully conscious, give two glasses of water. Obtain medical attention immediately.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 295°C

Flammable Limits: Lower 2, Upper 12.7

Extinguishing Media: Water, CO₂, dry chemical

Auto Ignition Temperature: None

Unusual Fire and Explosion Hazards: Will release small amounts of HBr.

Special Fire Fighting Procedures: Flammable liquid and vapors may travel great distances to ignition source and flash back

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be Taken in Case Material is Spilled: Soak up with absorbent, eliminate source of ignition. Remove residue with detergent and water.

SECTION VII - HANDLING AND STORAGE

Storage Requirements: Store in a cool dry place. Keep container closed when not in use. Handle as a flammable/corrosive liquid.

Handling Requirements: Safe precautionary use to prevent spills and exposure to skin or fumes.

Other Precautions: None

SECTION VIII - CONTROL MEASURES

Respiratory Protection (TYPE): NIOSH approved respirator.

Ventilation: Yes

Mechanical (General): Explosion proof

Local Exhaust: Yes

Protective Gloves: Recommended, NIOSH approved

Other Protective Clothing or Equipment: Rubber apron is recommended.

Eye Protection: Safety Glasses

Regulatory Information: The chemical components are listed on TSCA and DSL inventory. See composition section ii for CAS numbers

SECTION IX - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: 465°F

Specific Gravity (Water = 1): 1.05

Vapor Pressure (mmHg) : <0.05mmHg @ 25°C

Percent Volatile By Volume: 92%

Vapor Density (Air = 1): NA

Evaporation Rate (Butyl acetate = 1) : >2

Melting Point: N/A

Solubility in Water: Complete

Reactivity in Water: None

Appearance and Odor: Clear light red, alcoholic 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: Hydrobromides, Nitrogen Products, CO, CO₂

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: Flammable Liquid, Corrosive, NOS (Contains Isobutanol, Tetrahydrofurfuryl Alcohol, Hydrobromic Acid, Phosphoric Acid))

Hazard Class: 3, 8

Identification Number: UN2924

Packing Group: II

Type D.O.T Label Required Information: Flammable Liquid

SECTION XV - 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 XVI - OTHER INFORMATION

The labeling of this product is indicated in Section II. The full text of all abbreviations indicated by codes in the MSDS are as follows:

R20/21/22	Harmful by inhalation, in contact with skin, and if swallowed
R34	Causes Burns
R37	Irritating to respiratory system
S-26	In case of contact with eyes rinse immediately with water and seek medical attention
S-36/37/39	Wear suitable protective clothing, gloves, and eye/face protection
H314:	Causes severe skin burns and eye damage
H335:	May cause respiratory irritation
H290:	May be corrosive to metals
H227	Combustible liquid.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H302	Harmful if swallowed.
P234:	Keep only in original container.
P260:	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fumes/gas/mist/vapours/spray

P264: Wash thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/
eye protection/face protection.

P301 + P330 + P331:IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340:IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.

P363: Wash contaminated clothing before reuse.

P390: Absorb spillage to prevent material damage

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