

MATERIAL SAFETY DATA SHEET

MSDS Date: 12.16.2010

MSDS Name: Kapp Lunar Flux for Soldering of Aluminum 550°F to 800°F

MSDS Number: 556

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SECTION I: PRODUCT AND COMPANY INFORMATION

Product Name: Kapp Lunar Flux for Soldering of Aluminum 550°F to 800°F

CAS Number:

COMPONENT	CAS NO.	COMPONENT	CAS NO.
Zinc Chloride	7646-85-7	Fluoride (as sodium salt)	7681-49-4
Ammonium Chloride	12125-02-9	n-Propyl alcohol	71-23-8

Company Identification: Kapp Alloy and Wire, 1 Klein Street / PO Box 1188, Oil City, PA 16301 USA

Contact: Operations Team Leader, Telephone: 814.676.0613, Fax: 814.676.5565, Email: info@kappalloy.com**SECTION II: HAZARD INFORMATION****PRIMARY ROUTES OF ENTRY**

- Inhalation: Irritation to the respiratory system. Coughing, chest pain, nausea, and headaches. Existing disorders will be aggravated.
- Ingestion: Can cause damage to the digestive system. Corrosive to mucous membranes.
- Skin Absorption: No known adverse absorption effects. Dermatitis: possible chemical burns corrosive to skin. Existing disorders will be aggravated.
- Eye contact: Irritation to eyes, tearing, burn of eye surface, corrosive.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

- Dermatitis and contact burns to skin, eyes, and respiratory system.

SECTION III: COMPOSITION / INGREDIENTS

*(Hazardous components 1% or greater; Carcinogens 0.1% or greater)

Component	CAS Number	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED
Zinc Chloride	7646-85-7	1 mg/m ³	1 mg/m ³	Hazard: Corrosive
n-Propyl alcohol	71-23-8	500 mg/m ³	-----	Hazard: Flammable
Fluoride (sodium salt)	7681-49-4	2.5 mg/m ³	2.5 mg/m ³	Hazard: Acute & Chronic Effects (See Sec III)
Ammonium Chloride	12125-02-9	10 mg/m ³	10 mg/m ³	Hazard: May be nuisance dust

NA = Not Applicable NE = Not Established NAIF = No Applicable Information found

SECTION IV: FIRST AID MEASURES

Ingestion:	Call a physician or Poison Control Center at once; advise of chemical composition (Section III) and potential health effects.
Skin:	Promptly wash with water to remove any residue. If a rash or burn develops, consult a physician. Material is corrosive. HF may be present.
Inhalation:	Terminate exposure and remove to fresh air. Call physician; advise of chemical composition (section III) and potential health hazards. Over-inhalation may cause life-threatening lung injury.
Eyes:	Flush with water for at least 15 minutes to remove any residue. Get medical help – blindness can result.

SECTION V: FIRE FIGHTING MEASURES

Flash point & Methods Used:	59°F
Auto Ignition Temperature:	N/A
Flammability Limits:	(in air, % by volume)
	▪ LEL: 2.1
	▪ UEL: 13.7

Extinguisher Media: Alcohol-type or all-purpose type foams for large fires. CO₂ or dry chemical extinguisher for small fires.

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Special Fire Fighting Procedures: Full protective equipment required. May release zinc oxide and HCl fumes.
Toxic metal halide fumes produced.

Unusual Fire/Explosion Hazards: Dense smoke may be generated

EMERGENCY PHONE NUMBER * CALL CHEMTREC (800) 424-9300 * AVAILABLE 24 HOURS

SECTION VI: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is spilled or released:

- contain, absorb, sweep-up, and dispose.
- Flush area to chemical sewer.

SECTION VII: HANDLING AND STORAGE

Precautions to be taken in handling and storage:

- Store flux at ambient conditions. Keep under extremely dry and controlled conditions. Wash thoroughly after handling and remove any residue.
- Do not breathe fumes – may be fatal! Professionally wash contaminated clothing before re-use. Material will naturally absorb moisture and cake solid. Existing lung disorders will have increased toxic susceptibility.

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Use NIOSH-approved breathing apparatus to prevent exposure to dusts and fumes.

Eye Protection: Approved safety glasses or welding goggles, appropriate to your procedure, should be worn.

Ventilation: Maintain airflow away from user to remove all fumes and dusts, so that the PEL is never exceeded. Adhere to Environmental regulations for exhausts.

Other: Standard protective equipment used in soldering (/applicable) operations.

*Protective gloves should be chemical and acid impervious.

*Conform to all local, state, federal regulations.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: °F @ 760 mmHg: 207°F

Specific Gravity (H₂O = 1 @ 72°F): 1.51

Solubility in Water: 100 (complete)

Active Temperature Range: Active between 550 – 800 °F

Evaporation Rate (Butyl Acetate = 1): 1.3

Appearance and Odor: White slurry with alcohol odor; corrosive, flammable

Use: Aluminum soldering flux

SECTION X: STABILITY AND REACTIVITY

Stability: Stable

Conditions to avoid: Extreme high temperature / high pressure

Incompatibility (materials to avoid): Strong nitric, sulfuric acid, cyanide

Hazardous Decomposition Products: In presence of water and heat – HCl and HF; zinc oxide

Hazardous Polymerization: Will not occur.

SECTION XI: TOXICOLOGY INFORMATION

Target Organ Statement

- DANGER: Solids cause severe burns to skin, eyes, and respiratory system. Fluorides affect bones, muscles, and may have crippling effects long-term. Alcohol may affect kidneys.

Effects of Chronic Exposure

- Dermatitis and contact burns to skin, eyes, and respiratory system (See target organ statement).

	*0 = Insignificant	1 = Slight	2 = Moderate	3 = High	4 = Extreme
	Health	Flammability	Reactivity	Special	
NFPA Rating	3	3	0	0	
HMIS Rating	3	3	0	PE=C	

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SECTION XII: ECOLOGY INFORMATION**STATE RIGHT-TO-KNOW PROGRAMS:****Pennsylvania:** All materials of Section III are listed in PA code Title 34.**California:** As currently manufactured, this material contains no compounds subject to the Reporting and labeling requirements of Proposition 65.**SECTION XIII: DISPOSAL CONSIDERATION**

Waste Disposal Method

- Dispose of according to federal, state, local, and OSHA regulations.

SECTION XIV: TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION

DOMESTIC GROUND

Proper shipping name: Flammable Liquids, Corrosive, N.O.S. (n-Propyl Alcohol; Zinc chloride)

Hazard Class: 3, Subsidiary 8

ID & Packing Group Number: UN 2924, PG III

ERG Guide Number: 132

TOXIC SUBSTANCE CONTROL ACT

All components of this compound are listed within the TSCA inventory.

SARA Title III Program

Section 313 Supplier Notification: This product contains the following toxic chemicals subject to the reporting requirements of EPCRA of 1986 and 40 CFR 372.

Component	CAS Number	SARA III
Zinc Chloride	7646-85-7	<63%
n-Propyl alcohol	71-23-8	< 30%
Fluoride (sodium salt)	7681-49-4	<2%
Ammonium Chloride	12125-02-9	<6%

SECTION XVI: OTHER INFORMATION

This information must be included in all MSDS that are copied and distributed for this material.

**GOOD HOUSEKEEPING PROCEDURES SHOULD BE MAINTAINED.
PERSONNEL SHOULD WASH THOROUGHLY BEFORE SMOKING OR EATING
FOOD AND DRINK SHOULD NOT BE CONSUMED, TOBACCO PRODUCTS USED, OR COSMETICS
APPLIED IN AREAS WHERE EXPOSURES EXIST.**

Please retain this sheet for your files. Kapp Alloy maintains a file of Material Safety Data Sheets (MSDS) for each alloy produced in compliance with Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) & various right-to-know laws.

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to Kapp Alloy and Wire, Inc. at the time of issue. It is our policy to include an MSDS with initial orders for each product. This submission is to become a matter of record and need not accompany subsequent shipments for the same product to the same customer. The information contained on this sheet is intended solely for employee health and safety education and not for contract specification purposes. No warranty, guarantee, or representation is made by Kapp Alloy and Wire, Inc., nor does Kapp Alloy and Wire, Inc. assume any responsibility in connection there within; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances. Should you need additional information, contact us.