



SAFETY DATA SHEET
Hasaconi
Lead-Free Soldering Flux
LF2013
MSDS #: EFH 16-1/7
Date of Preparation: January 2026

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

1.1 Product Details:

Product Name : Hasaconi Lead-free soldering flux LF2013
Trade Name : Hasaconi LF2013

1.2 Company's Identification:

Manufacturer's Name and Address : Singapore Asahi Chemical & Solder
Industries Pte Ltd
47 Pandan Road
Singapore 609288

Telephone : (65) 6262-1616
Facsimile : (65) 6261-6311

1.3 Contact Point:

Designation : Chemist
Emergency Telephone Number : (65) 6262-1616

SECTION 2: HAZARD IDENTIFICATION

GHS classification

Flammable liquid : Category 2
Acute toxicity
 Oral : Category 4
 Dermal : Category 5
 Inhalation : Category 5
Skin corrosion/irritation : Category 3
Serious eye damage/irritation : Category 2B
Specific target organ toxicity (single exposure) : Category 3 (Narcotic effects)
Aspiration hazard : Category 2

GHS label elements



GHS Signal Word: Danger

GHS Hazard Statement:

- H225 Highly flammable liquid and vapour
- H302 Harmful if swallowed
- H305 May be harmful if swallowed and enters airways
- H313 May be harmful in contact with skin
- H333 May be harmful if inhaled
- H316 Causes mild skin irritation
- H320 Causes eye irritation
- H336 May cause drowsiness or dizziness

GHS Precautionary Statement:

Prevention

P210 Keep away from heat, sparks, open flames, hot surfaces.
P233 Keep container tightly closed.
P240 Ground/Bond container and receiving equipment.
P241 Use explosion-proof electrical and ventilating equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust, fume, gas, mist, vapours and spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, eyes and face protections.

Response

P301, P312, P330 IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P303, P361, P353 IF ON SKIN (or hair): Remove or take off immediately all contaminated clothing. Rinse skin with water or 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.
P313, P332, P337 If eye or skin irritation persists: Get medical advice/attention.
P331 Do NOT induce vomiting.
P370, P378 In case of fire: Use foam, water spray or fog for extinction.

Storage

P403, P233, P235 Store in a well-ventilated place. Keep container tightly closed and cool.
P405 Store locked up.

Disposal

P501

Dispose of contents or container to appropriate waste site in accordance with local and national regulations.

Other Hazards which do not result in Classification : Repeated exposure may cause skin dryness or cracking. Slightly irritating to respiratory system. Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition sources causing a flashback fire danger.

SECTION 3: COMPOSITION/INFORMATION ON MATERIAL

Chemical Name	CAS No.	%	OSHA PEL (ppm)	ACGIH TLV (ppm)	Other Limits Recommended
Rosin/Resin	Proprietary	13	-	-	-
Organic Acids	Proprietary	3	-	-	-
Organohalides	Proprietary	0.2			
Isopropyl Alcohols	67-63-0	82	-	-	-
Others	Proprietary	1.8			
Total		100			

SECTION 4: FIRST AID MEASURES

Ingestion:

Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Transport to nearest medical facility for additional treatment.

Eye Contact:

Flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

Skin Contact:

Remove contaminated clothing. Flush with large amounts of water.

Inhalation:

Using respiratory protection, immediately remove victim from exposure. Administer CPR if breathing has stopped. Call for prompt medical attention.

Most important symptoms/effects, acute and delayed:

Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Other signs and symptoms of central nervous system (CNS) depression may include headache, nausea, and lack of coordination. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

Immediate medical attention, special treatment:

Causes central nervous system depression. Call a doctor or poison control center for guidance. Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal.

SECTION 5: FIRE-FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Suitable Extinguishing Media:

Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into aquatic environment.

Specific hazards arising from chemicals:

Flammable liquid, can release vapors that form flammable mixtures at temperatures at or above the flashpoint. Try to cover liquid spills with foam.

Protective Equipment & Precautions for Fire Fighters:

Wear full protective clothing and self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations.

Personal Precautions, Protective Equipment and Emergency Procedures:

Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see SECTION 8.

Environmental Precautions:

Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environment contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator.

Methods and Materials for Containment and Clean Up:

Transfer spilled liquid by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose safely. Remove contaminated soil and dispose safely.

SECTION 7: HANDLING AND STORAGE

General Precautions:

Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling.

Precautions for Safe Handling:

Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 10 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling

operations. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Handling Temperature: Ambient.

Conditions for Safe Storage:

Keep away from aerosols, flammables, oxidizing agents, corrosives and from products harmful or toxic to human or to the environment. Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Storage Temperature: Ambient.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

Engineering Measures	: Maintain general or local exhaust ventilation to meet exposure limit requirements.
Respiratory Protection	: NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation.
Protective Gloves	: Chemical resistant gloves.
Eye Protection	: Wear safety glasses with side shields.
Other Protective Equipment	: For open systems where contact is likely, wear long sleeves, chemical resistant gloves and chemical goggles.
Work Hygienic Practices	: Do not eat, drink, or smoke in work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Transparent, pale yellowish liquid
Odor	: Alcohol odor
Solubility in water:	: Slightly soluble
Boiling Point(°C)	: 78°C
Melting Point(°C)	: NE
Vapor Pressure(mm of Hg at 20°C)	: NE
Vapor Density (air=1)	: NA
Percentage Volatiles (by Volume)	: NE
Volatile Organic Compound (VOC)	: >80%
Evaporation Rate (butyl acetate=1)	: NE
Specific Gravity (water=1 at 25°C)	: 0.830 ± 0.005 @ 22°C
Flash Point (°C)	: 17°C by TCC
Lower Explosive Limit	: NE
Upper Explosive Limit	: 2.5%
Auto-ignition Temperature(°C)	: 455.6°C

SECTION 10: PHYSICAL HAZARDS (STABILITY AND REACTIVITY)

Chemical Stability	: Stable under normal temperature and pressure.
Possibility of Hazardous Reaction	: Data not available
Condition to avoid	: Direct contact with flame and excessive heating
Incompatible materials	: strong oxidizing agents. Strong acids.
Hazardous Decomposition products	: None specified.
Hazardous polymerization	: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity data	: None.
Carcinogenicity	: Not listed.
Reproductive Effect	: None.
Germ Cell Mutagenicity	: Not mutagenic.
Inhalation Toxicity	: May cause headache and dizziness, are anesthetic and may have other central nervous system effects.
Acute Ingestion	: Small amounts of the liquid aspirated into the respiratory systems during ingestion, or from vomiting may cause bronchiopneumonia or pulmonary edema.
Serious Eye Damage/Irritation	: Irritating to eyes.
Respiratory or Skin Sensitisation	: Not a skin sensitizer.
Aspiration Hazard	: Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Medical Conditions Generally Aggravated by Exposure	: None specified.

SECTION 12: ECOLOGICAL INFORMATION

Mobility & Bioaccumulation	: Volatile material.
Biodegradability	: Non biodegradable.
Aquatic Toxicity	: NE

SECTION 13: DISPOSAL INFORMATION

Material Disposal	: It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment in drains or in water courses. Waste product should not be allowed to contaminate soil or water.
Container Disposal	: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut, or weld uncleaned drums. Send to drum recoverer or metal reclaimer.
Local Legislation	: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14: TRANSPORT INFORMATION

Hazard Class : 3
UN Number : 1993
PSN : Flammable Liquid n.o.s. (Isopropyl Alcohol)
Special shipping instruction : NA

SECTION 15: REGULATORY INFORMATION

- a. Proposed classification : Harmful.
- b. Risk phrase
- | | |
|-----------|--|
| R11 | Highly flammable. |
| R20/21/22 | Harmful by inhalation, in contact with skin and if swallowed |
| R36/37/38 | Irritating to the eyes, respiratory system and skin. |
- c. Safety phrase
- | | |
|-----------|--|
| S3/7/9 | Keep container tightly closed, in a cool well ventilated place. |
| S20/21 | When using do not eat, drink or smoke. |
| S23 | Do not breathe fume or vapor. |
| S24/25/26 | Avoid contact with skin or eyes. In case of contact with skin, rinse immediately with plenty of water. |
| S36/37/39 | Wear suitable protective clothing, gloves and eye/face protection. |
| S47/49 | Keep only in the original container at temperature not exceeding 25°C. |
| S59 | Refer to manufacturer/supplier for information on recovery/recycling. |

SECTION 16: OTHER INFORMATION

THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF THE COMPANY'S KNOWLEDGE AND BELIEVED ACCURATE AND RELIABLE AS OF THE DATE INDICATED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.

*optional

NE = Not Established

NA = Not Applicable

PEL = Permissible Exposure Level