



Revision Number: 005.0

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**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE X33-08I known as X33-08I NO CLEAN FLUX 1GA</b>	<b>IDH number:</b>	479675
<b>Product type:</b>	Liquid Flux	<b>Item number:</b>	M00359
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	<b>Contact information:</b>		
Henkel Electronic Materials LLC	Telephone: +1 (888) 943-6535		
14000 Jamboree Road	MEDICAL EMERGENCY Phone: Poison Control Center		
Irvine, CA 92606	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkel.com/electronics		

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** HIGHLY FLAMMABLE LIQUID AND VAPOR.  
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.  
CAUSES SKIN IRRITATION.  
MAY CAUSE AN ALLERGIC SKIN REACTION.  
CAUSES SERIOUS EYE IRRITATION.  
MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	2
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
ASPIRATION HAZARD	1

**PICTOGRAM(S)**



**Precautionary Statements**

**Prevention:** Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.

**Response:** IF SWALLOWED: Immediately call a physician or poison control center. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. Do NOT induce vomiting. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use

**Storage:** foam, dry chemical or carbon dioxide to extinguish.  
Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place.  
Keep cool. Store locked up.

**Disposal:** Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
2-Propanol	67-63-0	60 - 100
Adipic acid	124-04-9	0.1 - 1

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

**Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

**Skin contact:** Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion:** DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Symptoms:** See Section 11.

**Notes to physician:** Aspiration may cause pulmonary edema or aspiration pneumonia.

### 5. FIRE FIGHTING MEASURES

**Extinguishing media:** Water spray (fog), foam, dry chemical or carbon dioxide.

**Special firefighting procedures:** Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode.

**Unusual fire or explosion hazards:** Vapors may form explosive mixtures with air.

**Hazardous combustion products:** Thermal decomposition can lead to release of irritating gases and vapors.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not allow product to enter sewer or waterways.

**Clean-up methods:**

Evacuate personnel to safe areas. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a partly filled, closed container until disposal.

## 7. HANDLING AND STORAGE

**Handling:**

Use only with adequate ventilation. Keep away from heat, spark and flame. Wear suitable protective clothing, gloves and eye/face protection. Keep container closed. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full. Wash thoroughly after handling.

**Storage:**

For safe storage, store between 15 °C (59°F) and 30 °C (86°F). Store away from ignition sources. Keep away from heat, spark and flame. Store in original container until ready to use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
2-Propanol	200 ppm TWA 400 ppm STEL	400 ppm (980 mg/m3) PEL	None	None
Adipic acid	5 mg/m3 TWA	None	None	None

**Engineering controls:**

Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation, wear suitable respiratory equipment.

**Respiratory protection:**

When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

**Eye/face protection:**

Safety goggles or safety glasses with side shields.

**Skin protection:**

Chemical resistant, impermeable gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Alcoholic
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not determined
<b>Vapor pressure:</b>	6.6 kPa (25 °C (77°F))
<b>Boiling point/range:</b>	82 °C (179.6 °F)
<b>Melting point/ range:</b>	Not determined
<b>Specific gravity:</b>	0.8
<b>Vapor density:</b>	Heavier than air.
<b>Flash point:</b>	14 °C (57.2 °F)
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	398 °C (748.4 °F)
<b>Evaporation rate:</b>	Not determined
<b>Solubility in water:</b>	Soluble
<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>VOC content:</b>	92.9 %; 743 g/l
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Thermal decomposition can lead to release of irritating gases and vapors.
<b>Incompatible materials:</b>	Incompatible with oxidising agents. Dissolves aluminium and zinc slowly with formation of hydrogen.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Keep away from open flames, hot surfaces and sources of ignition.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes

### Potential Health Effects/Symptoms

<b>Inhalation:</b>	Inhalation of processing fumes may be harmful. Vapor overexposure may cause drowsiness. Dizziness.
<b>Skin contact:</b>	Causes skin irritation. May cause allergic skin reaction.
<b>Eye contact:</b>	Causes serious eye irritation.
<b>Ingestion:</b>	Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
2-Propanol	Oral LD50 (RAT) = 5,045 mg/kg Oral LD50 (RABBIT) = 6,410 mg/kg Oral LD50 (RAT) = 4.7 g/kg Oral LD50 (RABBIT) = 8.0 g/kg Oral LD50 (RABBIT) = 5.03 g/kg Dermal LD50 (RABBIT) = 12,800 mg/kg	Allergen, Blood, Brain, Central nervous system, Irritant, Kidney, Liver, Spleen
Adipic acid	Oral LD50 (RABBIT) = > 11,000 mg/kg Oral LD50 (RAT) = > 11,000 mg/kg	Irritant, Kidney, Liver, Nervous System, Respiratory

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
2-Propanol	No	No	No
Adipic acid	No	No	No

## 12. ECOLOGICAL INFORMATION

### Ecological information:

No specific studies have been conducted by Henkel on the ecotoxicity or environmental fate of this material; however, commonly available data on the material indicate that uncontrolled releases to soil, ground water, or surface waters could entail acute and/or chronic ecological effects, depending on the quantity and concentration of such releases. Releases of volatile components to the atmosphere are not believed to entail significant ecological consequences provided such releases are within the exposure levels set forth in this document. Accordingly, all appropriate measures should be taken to avoid uncontrolled releases to the environment, and any spills or other uncontrolled releases which may occur should be contained and cleaned up immediately in accordance with Section 6.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal.  
**Hazardous waste number:** D001: Ignitable.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Isopropanol  
**Hazard class or division:** 3  
**Identification number:** UN 1219  
**Packing group:** II

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Isopropanol  
**Hazard class or division:** 3  
**Identification number:** UN 1219  
**Packing group:** II

### Water Transportation (IMO/IMDG)

**Proper shipping name:** ISOPROPANOL  
**Hazard class or division:** 3  
**Identification number:** UN 1219  
**Packing group:** II

## 15. REGULATORY INFORMATION

### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.  
**TSCA 12 (b) Export Notification:** None above reporting de minimis  
**CERCLA/SARA Section 302 EHS:** None above reporting de minimis  
**CERCLA/SARA Section 311/312:** Fire, Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** None above reporting de minimis  
**CERCLA Reportable quantity:** 2-Propanol (CAS# 67-63-0) 100 lbs. (45.4 kg)  
**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

### Canada Regulatory Information

**CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Michele Oltra, Regulatory Affairs Specialist  
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