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1. PRODUCT AND COMPANY IDENTIFICATION

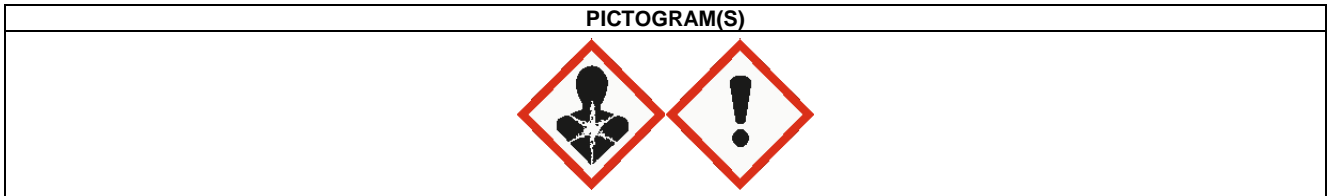
Product name: LOCTITE ABLESTIK 88-1LV known as **Ablebond 88-1LV (2.2g),** **IDH number:** 1203409
Product type/use: Conductive adhesive **Item number:** 1203409
Restriction of Use: None identified **Region:** United States
Company address: **Contact information:**
 Henkel Corporation Telephone: +1 (860) 571-5100
 One Henkel Way MEDICAL EMERGENCY Phone: Poison Control Center
 Rocky Hill, Connecticut 06067 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.henkeln.com

This product contains one or more components regulated under a Significant New Use Rule (SNUR) by the US EPA. See Section 15 for more information.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
WARNING:	CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION. SUSPECTED OF CAUSING GENETIC DEFECTS.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
GERM CELL MUTAGENICITY	2



Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection.

Response: IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

Storage: 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*
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IDH number: 1203409

Product name: LOCTITE ABLESTIK 88-1LV known as Ablebond 88-1LV (2.2g),
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Silver	7440-22-4	60 - 80
2,2'-[[2-(oxiranylmethoxy)-1,3-phenylene]bis(methylene)]bisoxirane	13561-08-5	10 - 30
Lactone	Proprietary	1 - 5
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile	568591-00-4	1 - 5

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, 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.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Oxides of carbon. Oxides of Metals in Section 3. Toxic and irritating 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:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed.
Storage:	For safe storage, store at or below -40 °C (-40°F) Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Protect from direct sunlight.

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
Silver	0.1 mg/m ³ TWA Dust and fume.	0.01 mg/m ³ PEL (as Ag)	None	None
2,2'-[[2-(oxiranylmethoxy)-1,3-phenylene]bis(methylene)]bisoxirane	None	None	None	None
Lactone	None	None	None	None
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile	None	None	None	None

Engineering controls:	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Respiratory protection:	Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.
Eye/face protection:	Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.
Skin protection:	Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid, Paste
Color:	Silver
Odor:	Slight
Odor threshold:	Not available.
pH:	Not applicable, Product is non-soluble (in water).
Vapor pressure:	< 700 hPa (20 °C (68°F))
Boiling point/range:	> 200 °C (> 392°F) Polymerizes before boiling point is reached.
Melting point/ range:	Not applicable, Product is a liquid
Specific gravity:	4.1
Vapor density:	> 1 20 °C
Flash point:	> 98 °C (> 208.4 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	The product is not flammable.
Evaporation rate:	Not available.
Solubility in water:	Largely insoluble.
Partition coefficient (n-octanol/water):	Not available.
VOC content:	3 %; 71 g/l
Viscosity:	Not available.
Decomposition temperature:	> 100 °C

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of Metals in Section 3. Toxic fumes. Irritating vapors.
Incompatible materials:	Strong oxidizing agents. Strong reducing agents.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation. Coughing. Shortness of breath.
Skin contact: Causes skin irritation. May cause allergic skin reaction. Argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).
Eye contact: Causes serious eye irritation.
Ingestion: Harmful if swallowed. May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Silver	Oral LD50 (Rat) = > 5,000 mg/kg Dermal LD50 (Rat) = > 2,000 mg/kg Inhalation LC50 (Rat, 4 h) = 750 µg/m ³ Inhalation LC50 (Rat, 4 h) = > 5.16 mg/l	Allergen, Eyes, Irritant, Respiratory, Skin
2,2'-[[2-(oxiranylmethoxy)-1,3-phenylene]bis(methylene)]bisoxirane	None	Irritant, Allergen, Blood, Reproductive
Lactone	Oral LD50 (Mouse) = 1,260 mg/kg Oral LD50 (Rat) = 1,540 mg/kg Oral LD50 (Mouse) = 1,720 mg/kg Inhalation LC50 (Rat, 4 h) = > 5.1 mg/l	Central nervous system, Irritant
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile	None	No Data

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silver	No	No	No
2,2'-[[2-(oxiranylmethoxy)-1,3-phenylene]bis(methylene)]bisoxirane	No	No	No
Lactone	No	No	No
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

14. TRANSPORT INFORMATION

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

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

Proper shipping name: RQ, Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
DOT Hazardous Substance(s): Silver

International Air Transportation (ICAO/IATA)

Proper shipping name: RQ, Environmentally hazardous substance, liquid, n.o.s. (Silver)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Silver

15. REGULATORY INFORMATION**United States Regulatory Information**

TSCA 8 (b) Inventory Status: All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.

TSCA 5(a) SNUR: This product contains the following component(s) subject to a Significant New Use Rule (SNUR) by the US EPA:
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile (CAS # 568591-00-4). The SNUR is codified at Section number: 40 CFR 721.11378

TSCA 12 (b) Export Notification: 1H-Imidazole-1-propanenitrile, 2-ethyl-ar-methyl- (CAS# 568591-00-4).

CERCLA/SARA Section 302 EHS: None above reporting de minimis.
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Silver (CAS# 7440-22-4).

CERCLA Reportable quantity: Silver (CAS# 7440-22-4) 1,000 lbs. (454 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: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 1,2,3,7,9,13,15

Prepared by: Product Safety and Regulatory Affairs

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