



## Safety Data Sheet

Page 1 of 11

LOCTITE ABLESTIK 8600 known as Abletherm 8600 (22g)

SDS No. : 395086

V001.5

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### Section 1. Identification of the substance/preparation and of the company/undertaking

**Product name:**

LOCTITE ABLESTIK 8600 known as Abletherm 8600 (22g)

**Other means of identification:**

LOCTITE ABLESTIK 8600

**Product code:**

IDH1204553

**Recommended use of the chemical and restrictions on use**

**Intended use:**

Adhesive

**Identification of manufacturer, importer or distributor**

**Manufacturer:** Henkel Corporation, Rancho Dominguez, 20021 Susana Road, Rancho Dominguez, CA 90221, United States Phone: +1-310-764-4600 Fax: +1-310-605-2274

**Importer:** Henkel Thailand Ltd The Offices at Centralworld, 35th Floor, 999/9 Rama 1 Rd, Kwang Patumwan, Khet Patumwan, Bangkok 10330, Thailand. Phone : +6622098000 Fax : +6622098008

**E-mail address of person responsible for Safety Data Sheet:**

ap-ua-psra.sea@henkel.com

**Emergency information:**

FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call CHEMTREC: +1 703-741-5970

### Section 2. Hazards identification

**GHS Classification:**

<u>Hazard Class</u>	<u>Hazard Category</u>
Skin sensitizer	Category 1
Acute hazards to the aquatic environment	Category 1
Chronic hazards to the aquatic environment	Category 1

**GHS label elements:**

**Hazard pictogram:**



**Signal word:**

Warning

**Hazard statement:**

H317 May cause an allergic skin reaction.  
H410 Very toxic to aquatic life with long lasting effects.

**Precaution:**

**Prevention:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.

**Response:**

P302+P352 IF ON SKIN: Wash with plenty of water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.

**Disposal:**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Section 3. Composition / information on ingredients****Substance or Mixture:**

Mixture

**Declaration of hazardous chemical:**

Hazard component CAS-No.	Content	GHS Classification
Silver >= 99,9 % Ag as powder (< 1 mm) - classified for environment 7440-22-4	60- 100 %	Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	1- 10 %	Skin sensitizer 1 H317 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	1- 10 %	Acute toxicity 5; Oral H303 Skin corrosion/irritation 3 H316 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Isobornyl acrylate 5888-33-5	1- 10 %	Acute toxicity 5; Oral H303 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1B H317 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane 3388-04-3	0.1- 1 %	Germ cell mutagenicity 2 H341 Carcinogenicity 2 H351 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412

**Section 4. First aid measures****Inhalation:**

Should not be a problem as product is of low volatility. However, if feeling unwell remove patient to fresh air.

**Skin contact:**

Rinse with running water and soap.

Obtain medical attention if irritation persists.

**Eye contact:**

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

**Ingestion:**

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

**Indication of immediate medical attention and special treatment needed:**

See section: Description of first aid measures

### Section 5. Fire fighting measures

**Suitable extinguishing media:**

water, carbon dioxide, foam, powder

**Improper extinguishing media:**

High pressure waterjet

**Specific hazards arising from the chemical:**

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) can be released.

In case of fire, keep containers cool with water spray.

**Special protection equipment and precautions for firefighters:**

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

### Section 6. Accidental release measures

**Personal precautions:**

Avoid contact with skin and eyes.

Wear protective equipment.

**Environmental precautions:**

Do not empty into drains / surface water / ground water.

**Clean-up methods:**

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

### Section 7. Handling and storage

**Handling:**

Avoid skin and eye contact.

**Storage:**

Ensure good ventilation/extraction.

Keep container tightly sealed.

Store in original container at -40°C

### Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

SILVER, METAL, DUST AND FUME 7440-22-4	<b>Value type</b>	Time Weighted Average (TWA):
	<b>mg/m<sup>3</sup></b>	0.1
	<b>Remarks</b>	ACGIH

**Respiratory protection:**

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

**Hand protection:**

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

**Eye protection:**

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

**Body protection:**

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

**Engineering controls:**

Ensure good ventilation/extraction.

**Hygienic measures:**

Good industrial hygiene practices should be observed.

### Section 9. Physical and chemical properties

<b>Appearance:</b>	silver paste
<b>Odor:</b>	Slight
<b>Odor threshold (CA):</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point / freezing point:</b>	Not determined
<b>Specific gravity:</b>	No data available.
<b>Boiling point:</b>	No data available.
<b>Flash point:</b>	Not applicable
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Lower explosive limit:</b>	No data available.
<b>Upper explosive limit:</b>	No data available.

<b>Vapor pressure:</b>	Not applicable
<b>Vapor density:</b>	No data available.
<b>Density:</b>	No data available.
<b>Solubility:</b>	No data available.
<b>Partition coefficient: n-octanol/water:</b>	No data available.
<b>Auto ignition:</b>	Not available.
<b>Decomposition temperature:</b>	
<b>Viscosity:</b>	No data available.
<b>VOC content:</b> (2010/75/EC)	< 3 %

## Section 10. Stability and reactivity

**Reactivity/Incompatible materials:**

Avoid contact with amines.  
Reacts with oxidants, acids and lyes  
Reducing agents.

**Chemical stability:**

Stable under recommended storage conditions.

**Conditions to avoid:**

No decomposition if stored and applied as directed.

**Hazardous decomposition products:**

Hydrocarbons  
carbon oxides.  
nitrogen oxides

## Section 11. Toxicological information

Symptoms of Overexposure: May cause irritation to the digestive tract.  
May cause irritation to respiratory system.  
Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).  
Prolonged or repeated contact may cause skin irritation.  
Irritating to eyes.

**Acute oral toxicity:**

Silver >= 99,9 % Ag as powder (< 1 mm) - classified for environment 7440-22-4	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	LD50
	Value	3,160 mg/kg
	Species	rat
	Method	
Isobornyl acrylate 5888-33-5	Value type	LD50
	Value	2,300 - 4,000 mg/kg
	Species	rat
	Method	
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane 3388-04-3	Value type	LD50
	Value	13,000 mg/kg
	Species	rat
	Method	

**Acute dermal toxicity:**

Silver >= 99,9 % Ag as powder (< 1 mm) - classified for environment 7440-22-4	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	LD50
	Value	> 3,000 mg/kg
	Species	rabbit
	Method	
Isobornyl acrylate 5888-33-5	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rabbit
	Method	
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane 3388-04-3	Value type	LD50
	Value	6,700 mg/kg
	Species	rabbit
	Method	

**Skin corrosion/irritation:**

(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	Result	not irritating
	Exposure time	
	Species	In vitro
	Method	OECD 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	mildly irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Isobornyl acrylate 5888-33-5	Result	irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	Result	not irritating
	Exposure time	
	Species	In vitro
	Method	OECD Guideline 437 (BCOP)

**Respiratory or skin sensitization:**

(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	Result	sensitising
	Test type	Freund's complete adjuvant test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Isobornyl acrylate 5888-33-5	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

**Germ cell mutagenicity:**

(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)

**Repeated dose toxicity:**

(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	Result	NOAEL=1,000 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	
	Species	rat
	Method	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

**Section 12. Ecological information****Ecotoxicity:**

Harmful to aquatic organisms., May cause long-term adverse effects in the aquatic environment.

**Toxicity:**

Silver >= 99,9 % Ag as powder (< 1 mm) - classified for environment 7440-22-4	Value type	EC50
	Value	0.00022 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	other guideline:
(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	Value type	EC50
	Value	2.36 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	Value type	EC50
	Value	1.6 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchnerella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC10
	Value	0.64 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchnerella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	LC50
	Value	1.79 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Danio rerio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	EC50
	Value	1.1 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	EC50
	Value	2.66 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Pseudokirchnerella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	0.254 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Pseudokirchnerella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Isobornyl acrylate 5888-33-5	Value type	LC50
	Value	0.704 mg/l
	Acute Toxicity Study	Fish



	Exposure time	96 h
	Species	Danio rerio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isobornyl acrylate 5888-33-5	Value type	EC50
	Value	1 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Isobornyl acrylate 5888-33-5	Value type	NOEC
	Value	0.405 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchnerella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC50
	Value	1.98 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchnerella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane 3388-04-3	Value type	LC50
	Value	42.3 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Cyprinus carpio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane 3388-04-3	Value type	EC50
	Value	58 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane 3388-04-3	Value type	NOEC
	Value	6 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC50
	Value	90 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane 3388-04-3	Value type	EC 50
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

**Persistence and degradability:**

(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	Result	Not readily biodegradable.
	Route of application	aerobic
	Degradability	28 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	readily biodegradable
	Route of application	aerobic
	Degradability	70 %
	Method	OECD Guideline 310 (Ready Biodegradability CO2 in Sealed Vessels (Headspace Test))
Isobornyl acrylate 5888-33-5	Result	
	Route of application	no data
	Degradability	72.9 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

2-(3,4-Epoxy)cyclohexyl)ethyltrimethoxysilane 3388-04-3	Result	
	Route of application	aerobic
	Degradability	28 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

**Bioaccumulative potential / Mobility in soil:**

(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate 42594-17-2	LogKow	4.6
	Temperature	
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	LogKow	5.09
	Temperature	
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Isobornyl acrylate 5888-33-5	LogKow	4.52
	Temperature	
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
2-(3,4-Epoxy)cyclohexyl)ethyltrimethoxysilane 3388-04-3	LogKow	4.1
	Temperature	23 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

**Section 13. Disposal considerations**

**Product**

**Method of disposal:**

Do not empty into drains / surface water / ground water.  
Dispose of in accordance with local and national regulations.

**Packaging**

**Disposal of uncleaned packages:**

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

**Section 14. Transport information**

**General information:**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**Section 15. Regulatory information**

**Regulatory Information:**

Ministry of Industry Notice. The system to classify and communicate the hazard of hazardous material, BE. 2555

**Global inventory status:**

Regulatory list	Notification
TSCA	yes

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**Section 16. Other information**

**Disclaimer:**

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.