



Safety Data Sheet according to GB/T 16483-2008

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LOCTITE 648 RETAINING COMPOUND known as 648 Retaining
Compd 50ML E/C/J

SDS No. : 153474

V001.10

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

Product name: LOCTITE 648 RETAINING COMPOUND known as 648 Retaining Compd 50ML E/C/J

Intended use: Anaerobic Adhesive

Company name:

Henkel (China) Investment Co. Ltd.
No.928 Zhangheng Rd.
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China

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Revision date: 07.01.2018

Emergency information: Emergency telephone: +86 532 8388 9090 (24h).

2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 (General rule for classification and hazard communication of chemicals):

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Skin corrosion/irritation	Category 2	
Serious eye damage/eye irritation	Category 1	
Skin sensitizer	Category 1	
Specific target organ toxicity - single exposure	Category 3	respiratory tract irritation
Acute hazards to the aquatic environment	Category 2	
Chronic hazards to the aquatic environment	Category 3	

Label elements according to GB 15258-2009 (General rules for preparation of precautionary label for chemicals):

Hazard pictogram:



Signal word: Danger

Hazard statement:	H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects. H315 Causes skin irritation. H318 Causes serious eye damage.
Prevention:	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P304+P340+P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse.
Storage:	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
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.

3. Composition / information on ingredients

General description: Mixture
Declaration of the ingredients according to GB 13690-2009:

Hazard component CAS-No.	Content	GHS Classification
Acrylic acid 79-10-7	1- < 10 %	Flammable liquids 3 H226 Acute toxicity 4; Oral H302 Acute toxicity 4; Inhalation H332 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 1A H314 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 2 H411
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	1- < 10 %	Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317
Cumene hydroperoxide 80-15-9	1- < 10 %	Flammable liquids 4 H227 Organic peroxides E H242 Acute toxicity 4; Oral H302 Acute toxicity 3; Inhalation H331 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 1B H314 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Acetic acid, 2-phenylhydrazide 114-83-0	0.1- < 1 %	Acute toxicity 3; Oral H301 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Carcinogenicity 2 H351 Specific target organ toxicity - single exposure 3; Inhalation H335
1,4-Naphthalenedione 130-15-4	< 0.1 %	Acute toxicity 3; Oral H301 Acute toxicity 1; Inhalation H330 Skin corrosion/irritation 2; Dermal H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1; Dermal H317 Specific target organ toxicity - single exposure 3; Inhalation H335 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1

		H410
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Only hazardous ingredients for which a classification according to GB 13690-2009 is already available are displayed in this table. For full text of the Hazard statements see section 16 "Other information".

4. First aid measures

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.
Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
Ingestion:	Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

5. Fire fighting measures

Extinguishing media:	Carbon dioxide, foam, powder
Notice and measures for fire fighting:	In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO ₂) can be released. In case of fire, keep containers cool with water spray. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

6. Accidental release measures

Emergency measures:	Avoid skin and eye contact. Do not let product enter drains.
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.

7. Handling and storage

Notice for handling:	Use only in well-ventilated areas. Avoid skin and eye contact.
Notice for storage:	Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation. Store in original containers at 8-21°C (46.4-69.8°F) and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.

8. Exposure controls / personal protection

Hazardous components	GBZ 2.1-2007	ACGIH	NIOSH	OSHA
Acrylic acid	(SKIN) 6 mg/m ³ PC-TWA	2 ppm TWA		none
Methacrylic acid	70 mg/m ³ PC-TWA	20 ppm TWA		none

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

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

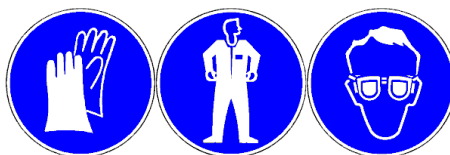
Eye protection: Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Body protection: Wear suitable protective clothing.

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.

Other protection: The selection of PPE shall at least compliant with "Law of the People's Republic of China on Prevention and Control of Occupational Diseases" and "Code of practice for selection of personal protective equipments" (GB/T 11651-2008).

Pictograms for recommended PPE:



9. Physical and chemical properties

Physical state:	liquid	Appearance:	green liquid
pH:	Not available.	Melting point:	Not applicable
Boiling point:	> 100.0 °C (> 212 °F)	Density:	1.13 g/cm ³
Flash point:	> 93.3 °C (> 199.94 °F)	Ignition temperature:	Not applicable
Solubility in water	Not miscible	Viscosity:	450 - 550 mPa.s

10. Stability and reactivity

Stability:	Stable under recommended storage conditions.
Conditions to avoid:	None if used for intended purpose.
Incompatible products:	Reaction with strong acids. Reacts with strong oxidants.
Decomposition products:	carbon oxides.
Hazardous polymerization:	Will not occur.

11. Toxicological information

Oral toxicity:

Acute toxicity estimate (ATE) : > 5,000 mg/kg
Method: Calculation method

Inhalative toxicity:

Acute toxicity estimate (ATE) : > 40 mg/l
Exposure time: 4 h
Test atmosphere: Vapor.
Method: Calculation method

Dermal toxicity:

Acute toxicity estimate (ATE) : > 5,000 mg/kg
Method: Calculation method

Skin irritation:

Result: Category 2

Other remarks:

Not available.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Acrylic acid 79-10-7	LD50	1,500 mg/kg	oral	4 h	rat	BASF Test OECD Guideline 403 (Acute Inhalation Toxicity) Expert judgement Expert judgement OECD Guideline 402 (Acute Dermal Toxicity)
	LC50	> 5.1 mg/l	inhalation		rat	
	Acute toxicity estimate (ATE)	11 mg/l	inhalation			
	Acute toxicity estimate (ATE)	1,100 mg/kg	dermal		rabbit	
	LD50	> 2,000 mg/kg	dermal			
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	LD50	> 2,000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity) not specified
	LD50	> 5,000 mg/kg	dermal		rabbit	
Cumene hydroperoxide 80-15-9	LD50	550 mg/kg	oral		rat	not specified
	LD50	1,200 - 1,520 mg/kg	dermal			not specified
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified
1,4-Naphthalenedione 130-15-4	LD50	190 mg/kg	oral		rat	not specified

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	highly corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	not irritating	24 h	rabbit	Draize Test
Cumene hydroperoxide 80-15-9	corrosive		rabbit	Draize Test

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	corrosive	21 d	rabbit	BASF Test

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Acrylic acid 79-10-7	not sensitising	Skin painting test	guinea pig	not specified

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Acrylic acid 79-10-7	negative negative	mammalian cell gene mutation assay DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro	with and without without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
Acrylic acid 79-10-7	negative	oral: gavage		rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay	with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Cumene hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Cumene hydroperoxide 80-15-9	negative	dermal		mouse	not specified

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	NOAEL=300 mg/kg	oral: gavage		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Cumene hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified

12. Ecological information

General ecological information:

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

Precautions required with respect to Environmental Hazards of articles in which this product is used should be considered.

Ecotoxicity:

No data available for the product.

Other adverse effects:
Not available.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Acrylic acid 79-10-7	LC50	27 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Acrylic acid 79-10-7	EC50	95 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Acrylic acid 79-10-7	EC10	0.03 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC50	0.13 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC20	900 mg/l	Bacteria	30 min	activated sludge, domestic	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge) DIN 38412-15
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	LC50	493 mg/l	Fish	48 h	Leuciscus idus melanotus	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	EC50	> 143 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	EC50	> 97.2 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	NOEC	> 97.2 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test) not specified
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	EC10	1,140 mg/l	Bacteria	16 h		
Cumene hydroperoxide 80-15-9	LC50	3.9 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Cumene hydroperoxide 80-15-9	EC 50	7 mg/l	Daphnia	24 h	Water flea (Daphnia magna)	
Cumene hydroperoxide 80-15-9	EC50	18 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Cumene hydroperoxide 80-15-9	ErC50	3.1 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test) not specified
Cumene hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min		
1,4-Naphthalenedione 130-15-4	EC50	0.011 mg/l	Algae	72 h	Dunaliella bioculata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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Acrylic acid 79-10-7	inherently biodegradable	aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Acrylic acid 79-10-7	readily biodegradable	aerobic	81 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	readily biodegradable	aerobic	94.2 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Cumene hydroperoxide 80-15-9		no data	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
1,4-Naphthalenedione 130-15-4		no data	0 - 60 %	OECD 301 A - F

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Acrylic acid 79-10-7		3.16				QSAR (Quantitative Structure Activity Relationship)
Acrylic acid 79-10-7	0.46				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	0.97				20 °C	not specified
Cumene hydroperoxide 80-15-9		9.1		calculation		OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Cumene hydroperoxide 80-15-9	2.16					not specified
Acetic acid, 2-phenylhydrazide 114-83-0	0.74					not specified
1,4-Naphthalenedione 130-15-4	1.71					not specified

13. Disposal considerations**Product disposal:**

If the waste is classified as hazardous waste according to GB 5085.7-2007 (Identification standards for hazardous wastes, General Specifications). Dispose of as hazardous waste in compliance with "Regulation on the Safety Management of Hazardous Chemicals", "Law of the People's Republic of China on the prevention and control of Environmental Pollution by Solid Waste", "National Catalogue of Hazardous Waste".

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. Disposal must be made according to official regulations.

14. Transport information**General information:**

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

Notice For Transportation:

Transport according to local and national regulations. Ensure containers will not leak, collapse, or being damaged when transported. DO NOT transport with incompatible materials. Transportation vehicle should be equipped with right fire-fighting equipment in case of emergency. Avoid solarization, drenched and high temperature when transported.

15. Regulatory information

The following laws and regulations lay down provisions in terms of chemicals safety use, storage, transportation, loading/unloading, classification as well as symbol.

“Law of the People's Republic of China on Work Safety” (Adopted by the 28th meeting of 9th NPC standing committee on 29th June 2002, revised by 10th meeting of 12nd NPC standing committee on 31st Aug 2014).

“Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases” (Adopted by the 24th meeting of 9th NPC standing committee on 27th October 2001, revised by 21st meeting of 12nd NPC standing committee on 2nd Jul 2016).

“Law of the People's Republic of China on environmental protection” (Adopted by 11st meeting of 7th NPC standing committee on 26th December 1989, revised by 8th meeting of 12nd NPC standing committee on 24th Apr 2014).

“Regulation on the Safety Management of Hazardous Chemicals” (Adopted by 32nd State Council executive meeting on 4th December 2013).

“Regulations on License to Work Safety” (Adopted by 54th State Council executive meeting on 29th July 2014).

China Inventory of Existing Chemicals:

All components are listed or are exempt from Inventory of Existing Chemical Substances in China.

16. Other information

Issue date:

19.02.2019

Issue department:

Dayong Tian, Product Safety & Regulatory Affairs Specialist for Greater China

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. The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

Others:

The full text of all abbreviations indicated by codes in this safety data sheet section 3 are as follows:

H226 Flammable liquid and vapor.
H227 Combustible liquid.
H242 Heating may cause a fire.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H401 Toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.