



Safety Data Sheet according to GB/T 16483-2008

Page 1 of 11 .

LOCTITE 680 RETAINING COMPOUND known as 680 Retaining
Compd 50ML E/C/J

SDS No. : 153464

V001.8

Revision: 12.04.2016

printing date: 19.02.2019

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

Product name: LOCTITE 680 RETAINING COMPOUND known as 680 Retaining Compd 50ML E/C/J

Intended use: Anaerobic Adhesive

Company name:

Henkel (China) Investment Co. Ltd.
No.928 Zhangheng Rd.
201203 Pudong, Shanghai, P.R. China

China

Phone: +86-21-2891 8000

Fax-no.: +86-21-2891 5137

Revision date: 12.04.2016

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>
Serious eye damage/eye irritation	Category 2A	
Skin sensitizer	Category 1	
Specific target organ toxicity - single exposure	Category 3	respiratory tract irritation

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

Hazard pictogram:



Signal word:

Warning

Hazard statement:	H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
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. P280 Wear eye protection/face protection. P280 Wear protective gloves.
Response:	P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. 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. P337+P313 If eye irritation persists: 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: Substance
Declaration of the ingredients according to GB 13690-2009:

Hazard component CAS-No.	Content	GHS Classification
Hydroxyalkyl methacrylate Proprietary	30- < 50 %	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
Maleic acid 110-16-7	0.1- < 1 %	Acute toxicity 4; Oral H302 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 3 H402
Methacrylic acid 79-41-4	0.1- < 1 %	Flammable liquids 4 H227 Acute toxicity 4; Oral H302 Acute toxicity 4; Inhalation H332 Acute toxicity 3; Dermal H311 Skin corrosion/irritation 1A H314 Acute hazards to the aquatic environment 3 H402
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

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. Seek medical advice.
Eye contact:	Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.
Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
Ingestion:	Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting. Seek medical advice.

5. Fire fighting measures

Extinguishing media:	Carbon dioxide, foam, powder
Fire-fighting method:	In case of fire, keep containers cool with water spray.
Notice and measures for firing fighting:	In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) 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 allow product to enter sewer or waterways.
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 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.

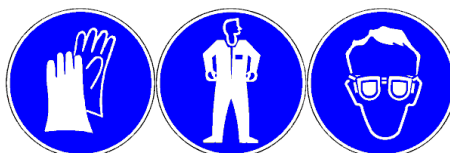
8. Exposure controls / personal protection

Hazardous components	GBZ 2.1-2007	ACGIH	NIOSH	OSHA
Methacrylic acid	70 mg/m ³ PC-TWA	20 ppm TWA		none

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

- Respiratory protection:** Use only in well-ventilated areas.
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:** Wear protective glasses.
- 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).
Good industrial hygiene practices should be observed. Do not eat, drink or smoke while working.
Good industrial hygiene practices should be observed.

Pictograms for recommended PPE:



9. Physical and chemical properties

Physical state:	liquid	Appearance:	green Liquid
Boiling point:	> 149 °C (> 300.2 °F)	Density:	1.11 g/cm ³
Flash point:	> 93.3 °C (> 199.94 °F)	Ignition temperature:	Not available.
Solubility in water	Slightly soluble	Viscosity:	750 - 1,750 mPa.s

10. Stability and reactivity

- Conditions to avoid:** Stable
- Incompatible products:** Reacts with strong oxidants.

Decomposition products: carbon oxides.
May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

Hazardous polymerization: None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.

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

Other remarks:

Not available.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Hydroxyalkyl methacrylate	LD50	> 2,000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Proprietary Cumene hydroperoxide	LD50	> 5,000 mg/kg	dermal		rabbit	
80-15-9	LD50	550 mg/kg	oral		rat	
Maleic acid	LD50	708 mg/kg	oral		rat	
110-16-7	LD50	1,560 mg/kg	dermal		rabbit	
Methacrylic acid	LD50	1,320 mg/kg	oral	4 h	rat	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) Expert judgement Dermal Toxicity Screening
79-41-4	LC50	> 3.6 mg/l	inhalation		rat	
	Acute toxicity estimate (ATE)	500 mg/kg	dermal		rabbit	
	LD50	500 - 1,000 mg/kg	dermal			

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Cumene hydroperoxide 80-15-9	corrosive		rabbit	Draize Test
Methacrylic acid 79-41-4	Category 1A (corrosive)	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Methacrylic acid 79-41-4	Category I		rabbit	Draize Test

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Methacrylic acid 79-41-4	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
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	
Methacrylic acid 79-41-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Methacrylic acid 79-41-4	negative	inhalation		mouse	OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Cumene hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	

12. Ecological information**General ecological information:**

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

Harmful to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

Ecotoxicity:

No data available.

Other adverse effects:
Not available.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Hydroxyalkyl methacrylate Proprietary	LC50	493 mg/l	Fish	48 h	Leuciscus idus melanotus	DIN 38412-15
Hydroxyalkyl methacrylate Proprietary	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroxyalkyl methacrylate Proprietary	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	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	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min		
Maleic acid 110-16-7	LC50	> 245 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
Maleic acid 110-16-7	EC50	42.81 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacrylic acid 79-41-4	LC50	85 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Methacrylic acid 79-41-4	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Methacrylic acid 79-41-4	NOEC	8.2 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid 79-41-4	EC50	45 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid 79-41-4	EC10	100 mg/l	Bacteria	17 h		

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
---------------------------------	--------	-------------------------	---------------	--------

Hydroxyalkyl methacrylate Proprietary	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)
Maleic acid 110-16-7	readily biodegradable	aerobic	97.08 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Methacrylic acid 79-41-4	inherently biodegradable	aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Methacrylic acid 79-41-4	readily biodegradable	aerobic	86 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Hydroxyalkyl methacrylate Proprietary	0.97					
Cumene hydroperoxide 80-15-9		9.1		calculation		OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Cumene hydroperoxide 80-15-9	2.16					
Maleic acid 110-16-7	-1.3				20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Methacrylic acid 79-41-4	0.93				22 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acetic acid, 2-phenylhydrazide 114-83-0	0.74					

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 24th meeting of 11st NPC standing committee on 31st Dec 2011).

“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 144th State Council executive meeting on 16th February 2011).

“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:

H227 Combustible liquid.
H242 Heating may cause a fire.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
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.
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.
H401 Toxic to aquatic life.
H402 Harmful to aquatic life.
H411 Toxic to aquatic life with long lasting effects.