



Safety Data Sheet according to GB/T 16483-2008

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LOCTITE 243 BO50MLEN/CH/JP

SDS No. : 316211

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

Product name: LOCTITE 243 BO50MLEN/CH/JP

Intended use: Adhesive

Manufacturer/Importer/Distributor Representative Company

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Emergency information: +86 21 2891 8311 (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 2A	
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:

Warning

Hazard statement:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.
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, eye protection, and face protection.
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: Mixture
Declaration of the ingredients according to GB 13690-2009:

Hazard component CAS-No.	Content	GHS Classification
Tetramethylene dimethacrylate 2082-81-7	25- < 30 %	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 2 H401
2,4,6-Triallyloxy-1,3,5-triazine 101-37-1	2.5- < 10 %	Acute toxicity 4; Oral H302 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Methacrylate resin Proprietary	2.5- < 10 %	Serious eye damage/eye irritation 2B H320 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
2-Hydroxyethyl methacrylate, ethoxylated 25736-86-1	1- < 2.5 %	Acute hazards to the aquatic environment 3 H402
maleic acid 110-16-7	0.25- < 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
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
1,4-Naphthalenedione 130-15-4	0.0025- < 0.025 %	Acute toxicity 3; Oral H301 Acute toxicity 1; Inhalation H330 Skin corrosion/irritation 1C H314 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 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

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

Hazardous combustion products:	Oxides of carbon, oxides of nitrogen, irritating organic vapors.
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:	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. Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation. Avoid skin and eye contact. See advice in section 8
Notice for storage:	Refer to Technical Data Sheet

8. Exposure controls / personal protection

Hazardous components	GBZ 2.1-2019	ACGIH	NIOSH	OSHA
Silane, dichlorodimethyl-, reaction products with silica	8 mg/m ³ PC-TWA Total dust.	3 mg/m ³ TWA Respirable particles. 10 mg/m ³ TWA Inhalable particles.		none
Ethene, homopolymer	5 mg/m ³ PC-TWA Total dust.	10 mg/m ³ TWA Inhalable particles. 3 mg/m ³ TWA Respirable particles.		none

- Engineering controls:** Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.
- Respiratory protection:** Use only in well-ventilated areas.
- Eye protection:** Wear protective glasses.
- Body protection:** Wear suitable protective clothing.
- Hand protection:** The use of chemical resistant gloves such as Nitrile is recommended. Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. 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.

9. Physical and chemical properties

Physical state:	liquid	Appearance:	blue
Evaporation rate:	Not available.	Odor:	characteristic
pH:	Not applicable, Product reacts with water.	Melting point:	Not available.
Boiling point:	> 149 °C (> 300.2 °F)	Density:	Not available.
Vapor density:	Not available.	Vapor pressure:	Not available.
Flash point:	> 93 °C (> 199.4 °F)	Ignition temperature:	Not available.
Lower explosive limit:	Not available.	Upper explosive limit:	Not available.
Solubility in water	Slightly soluble	Viscosity:	Not available.
Auto-ignition temperature:	Not available.	Flammability:	Not available.
Octanol / water distribution coefficient:	Not available.	Decomposition temperature:	Not available.
VOC:	Bulk adhesive Acrylate Assembly Industry < 60 g/kg, GB 33372-2020 Limit of volatile organic compounds content in adhesive		

10. Stability and reactivity

- Stability:** Stable
- Conditions to avoid:** Stable under normal conditions of storage and use.

Incompatible products:	Strong alkalis. Reducing agents. Oxygen scavengers. Other polymerization initiators. Strong oxidizing agents.
Decomposition products:	Irritating organic vapours. Oxides of carbon. Oxides of nitrogen.
Hazardous polymerization:	Will not occur.

11. Toxicological information

General toxicological information:

No laboratory animal data available.

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: vapour

Method: Calculation method

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
maleic acid 110-16-7	not carcinogenic	oral: feed	2 y daily	rat	male/female	OECD Guideline 451 (Carcinogenicity Studies)

Other remarks:

Not available.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	LD50 LD50	10,066 mg/kg > 3,000 mg/kg	oral dermal		rat rabbit	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) not specified
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1	LD50 LD50	753 mg/kg > 2,000 mg/kg	oral dermal		rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
Methacrylate resin Proprietary	LD50 LD50	> 5,000 mg/kg > 2,000 mg/kg	oral dermal		rat rat	OECD Guideline 401 (Acute Oral Toxicity) not specified
2-Hydroxyethyl methacrylate, ethoxylated 25736-86-1	Acute toxicity estimate (ATE) Acute toxicity estimate (ATE) Acute toxicity estimate (ATE)	> 5,000 mg/kg > 5 mg/l > 5,000 mg/kg	oral inhalation dermal			Expert judgement Expert judgement Expert judgement
maleic acid 110-16-7	LD50 LD50	708 mg/kg 1,560 mg/kg	oral dermal		rat rabbit	not specified not specified
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified
1,4-Naphthalenedione 130-15-4	LD50 LC50	124 mg/kg 0.046 mg/l	oral inhalation	4 h	rat rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
maleic acid 110-16-7	irritating	24 h	human	Patch Test
1,4-Naphthalenedione 130-15-4	Category 1C (corrosive)		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Methacrylate resin Proprietary	Category 2 (irritant)		rabbit	EU Method B.5 (Acute Toxicity: Eye Irritation / Corrosion)
maleic acid 110-16-7	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Tetramethylene dimethacrylate 2082-81-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	guinea pig	OECD Guideline 406 (Skin Sensitisation)
1,4-Naphthalenedione 130-15-4	sensitising	not specified	guinea pig	not specified

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	negative negative positive	in vitro mammalian chromosome aberration test bacterial reverse mutation assay (e.g. Ames test) in vitro mammalian chromosome aberration test	with and without with and without with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
maleic acid 110-16-7	negative negative	bacterial reverse mutation assay (e.g. Ames test) mammalian cell gene mutation assay	no data with and without		Ames Test OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
maleic acid 110-16-7	NOAEL=>= 40 mg/kg	oral: feed	90 ddaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

12. Ecological information

General ecological information:

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

Other adverse effects:
Not available.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	LC50	32.5 mg/l	Fish	48 h		DIN 38412-15
Tetramethylene dimethacrylate 2082-81-7	EC50	9.79 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tetramethylene dimethacrylate 2082-81-7	NOEC	2.11 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tetramethylene dimethacrylate 2082-81-7	NOEC	20 mg/l	Bacteria	28 d	activated sludge, domestic	not specified
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1	LC50	4.36 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1	EC50	19.4 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1	EC0	5 mg/l	Bacteria	3 h		OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Methacrylate resin Proprietary	LC50	1.2 mg/l	Fish	96 h	Cyprinus carpio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Methacrylate resin Proprietary	EC50	> 10 - 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacrylate resin Proprietary	EC50	> 12 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylate resin Proprietary	NOEC	< 0.35 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate, ethoxylated 25736-86-1	LC50	> 10 - 100 mg/l	Fish	96 h	not specified	OECD Guideline 203 (Fish, Acute Toxicity Test)
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)
maleic acid 110-16-7	EC50	74.35 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC10	11.8 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC10	44.6 mg/l	Bacteria	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshe mm-Test)
1,4-Naphthalenedione 130-15-4	LC50	0.045 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,4-Naphthalenedione 130-15-4	EC50	0.026 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation

1,4-Naphthalenedione 130-15-4	NOEC	0.07 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	Test) OECD Guideline 201 (Alga, Growth Inhibition Test)
1,4-Naphthalenedione 130-15-4	EC50	0.42 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,4-Naphthalenedione 130-15-4	EC50	5.94 mg/l	Bacteria	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Tetramethylene dimethacrylate 2082-81-7	readily biodegradable	aerobic	84 %	OECD Guideline 310 (Ready Biodegradability CO2 in Sealed Vessels (Headspace Test)
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1		aerobic	7 - 9 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Methacrylate resin Proprietary		aerobic	4 - 14 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
2-Hydroxyethyl methacrylate, ethoxylated 25736-86-1	readily biodegradable		> 60 %	OECD 301 A - F
maleic acid 110-16-7	readily biodegradable	aerobic	97.08 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
1,4-Naphthalenedione 130-15-4	not readily biodegradable.	aerobic	0 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Tetramethylene dimethacrylate 2082-81-7	3.1					OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1	2.8				20 °C	not specified
Methacrylate resin Proprietary	4.14				30 °C	OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
maleic acid 110-16-7	-1.3				20 °C	OECD Guideline 107 (Partition Coefficient (n- octanol / water), Shake Flask Method)
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:**

Dispose of in accordance with local and national regulations.

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.

14. Transport information

Road transport CN_DG:

Not dangerous goods

Marine transport IMDG:

Not dangerous goods

Air transport IATA:

Not dangerous goods

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 7th meeting of 13rd NPC standing committee on 29th Dec 2018).

“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:

12.04.2023

Issue department:

Product Safety & Regulatory Affairs for China

Disclaimer:

This Safety Data Sheet has been generated in accordance with Chinese law only. It provides information on the chemical product in the aspects of safety, health, environment, etc, recommending preventive and protective measures and countermeasures in case of emergency. The information contained herein does not constitute a guarantee concerning the properties of the material. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance. 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:

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.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H320 Causes eye irritation.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H401 Toxic to aquatic life.
H402 Harmful to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.