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

Product name: LOCTITE 290 THREADLOCKER

Intended use: Threadlocker

Manufacturer/Importer/Distributor Representative Company

Henkel Adhesive Technology (Shanghai) Co., Ltd.
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China

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Revision date: 16.09.2020

Emergency information: Emergency telephone: +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):

Hazard Class	Hazard Category	Target organ
Serious eye damage/eye irritation	Category 2A	
Specific target organ toxicity - single exposure	Category 3	respiratory tract irritation
Acute hazards to the aquatic environment	Category 3	
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:	H319 Causes serious eye irritation. H335 May cause respiratory irritation. 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. P273 Avoid release to the environment. P280 Wear eye protection/face protection.
Response:	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. P337+P313 If eye irritation persists: Get medical advice/attention.
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
Polyethylene glycol 200 dimethacrylate 25852-47-5	90- <= 100 %	Acute hazards to the aquatic environment 3 H402
α, α-dimethylbenzyl hydroperoxide 80-15-9	1- < 2.5 %	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
methyl methacrylate 80-62-6	0.1- < 0.25 %	Flammable liquids 2 H225 Acute toxicity 5; Inhalation H333 Skin corrosion/irritation 2 H315 Skin sensitizer 1 H317 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 3 H402
1,4-Naphthalenedione 130-15-4	0.0025- < 0.025 %	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 H317 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.
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

Hazardous combustion products: Oxides of carbon, oxides of nitrogen, irritating organic vapors.

Extinguishing media: Carbon dioxide, foam, powder

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: Ensure adequate ventilation.
Do not empty into drains / surface water / ground water.
Avoid contact with skin and eyes.
Wear protective equipment.

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.
Dispose of contaminated material as waste according to Section 13.

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.

Notice for storage: Refer to Technical Data Sheet

8. Exposure controls / personal protection

Hazardous components	GBZ 2.1-2019	ACGIH	NIOSH	OSHA
methyl methacrylate	100 mg/m3PC-TWA	50 ppm TWA 100 ppm TWA		none

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

Respiratory protection: Use only in well-ventilated areas.

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).

Pictograms for recommended PPE:

9. Physical and chemical properties

Physical state:	liquid	Appearance:	green
Evaporation rate:	Not available.	Odor:	mild
pH:	Not applicable	Melting point:	Not applicable
Boiling point:	> 150 °C (> 302 °F)	Density:	1.07 g/cm3
Vapor density:	Not available.	Vapor pressure:	Not available.
Flash point:	> 93.3 °C (> 199.94 °F)	Ignition temperature:	Not applicable
Lower explosive limit:	Not available.	Upper explosive limit:	Not available.
Solubility in water	Slightly soluble	Viscosity:	25 - 50 mPa.s
Auto-ignition temperature:	Not available.	Flammability:	Not available.
Octanol / water distribution coefficient:	Not available.	Decomposition temperature:	Not available.

VOC:

Bulk adhesive
Acrylate
Assembly Industry
< 80 g/kg , GB 33372-2020 Limit of volatile organic compounds content in adhesive

10. Stability and reactivity

Conditions to avoid: No decomposition if used according to specifications.

Incompatible products: Reaction with strong acids.
Reacts with strong oxidants.

Decomposition products: Irritating organic vapours.

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: 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
Polyethylene glycol 200 dimethacrylate 25852-47-5	LD50	> 5,000 mg/kg	oral		rat	not specified
α, α-dimethylbenzyl hydroperoxide 80-15-9	LD50 LD50 Acute toxicity estimate (ATE)	382 mg/kg 530 - 1,060 mg/kg 1,100 mg/kg	oral dermal dermal		rat rat	other guideline: other guideline: Expert judgement
methyl methacrylate 80-62-6	LD50 LC50 LD50	9,400 mg/kg 29.8 mg/l > 5,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	not specified not specified 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
α, α-dimethylbenzyl hydroperoxide 80-15-9	corrosive		rabbit	Draize Test

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
methyl methacrylate 80-62-6	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
α, α-dimethylbenzyl hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
α, α-dimethylbenzyl hydroperoxide 80-15-9	negative	dermal		mouse	not specified
methyl methacrylate 80-62-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
α, α-dimethylbenzyl hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified
methyl methacrylate 80-62-6	LOAEL=2000 ppm	inhalation	14 weeks6 hrs/day, 5 days/wk	mouse	Dose Range Finding Study
methyl methacrylate 80-62-6	NOAEL=1000 ppm	inhalation	14 weeks6 hrs/day, 5 days/wk	mouse	Dose Range Finding Study

12. Ecological information

General ecological information:

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

Ecotoxicity:

No data available.

Other adverse effects:
Do not empty into drains, soil or bodies of water.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Polyethylene glycol 200 dimethacrylate 25852-47-5	LC50	> 10 - 100 mg/l	Fish	96 h	not specified	OECD Guideline 203 (Fish, Acute Toxicity Test)
Polyethylene glycol 200 dimethacrylate 25852-47-5	EC0	> 10 - 100 mg/l	Bacteria	3 h	not specified	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	LC50	3.9 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	EC50	18 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	ErC50	3.1 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min		not specified
methyl methacrylate 80-62-6	LC50	350 mg/l	Fish	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
methyl methacrylate 80-62-6	EC50	69 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
methyl methacrylate 80-62-6	EC50	170 mg/l	Algae	96 h	Selenastrum capricornutum (newname: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
methyl methacrylate 80-62-6	NOEC	100 mg/l	Algae	96 h	Selenastrum capricornutum (newname: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
methyl methacrylate 80-62-6	EC20	> 150 - 200 mg/l	Bacteria	30 min	activated sludge, domestic	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
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
Polyethylene glycol 200 dimethacrylate 25852-47-5	readily biodegradable	aerobic	> 60 %	OECD 301 A - F
α, α-dimethylbenzyl hydroperoxide 80-15-9		no data	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
methyl methacrylate 80-62-6	readily biodegradable	aerobic	94 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
1,4-Naphthalenedione 130-15-4	not readily biodegradable.	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

α, α-dimethylbenzyl hydroperoxide 80-15-9		9.1		calculation		OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	2.16					not specified
methyl methacrylate 80-62-6	1.38				20 °C	other guideline:
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: 30.03.2022
Issue department: Product Safety & Regulatory Affairs for China

Disclaimer:

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Others:

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

H225 Highly 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.
H333 May be harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
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.