



Safety Data Sheet

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LOCTITE 460

SDS No. : 434271

V001.8

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

Product name: LOCTITE 460

Other means of identification: LOCTITE 460 BO500G CZ/PL/SK/EE

Product code: IDH246573

Recommended use of the chemical and restrictions on use

Intended use: Adhesive

Identification of manufacturer, importer or distributor

Importer: Henkel Malaysia Sdn Bhd 46th Floor, Menara TM, Jalan Pantai Baharu, 59200 Kuala Lumpur, Malaysia. Phone :+ 603 22461000 Fax : + 60322461188

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:

Hazard Class
Chronic hazards to the aquatic environment

Hazard Category
Category 3

GHS label elements:

Hazard statement: H412 Harmful to aquatic life with long lasting effects.

Precaution:

Prevention: P273 Avoid release to the environment.

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
Bis(3-ethyl-5-methyl-4-maleimidophenyl)methane 105391-33-1	1- 10 %	Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	0.1- 1 %	Toxic to reproduction 2 H361
Hydroquinone 123-31-9	< 0.1 %	Acute toxicity 4; Oral H302 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 H317 Germ cell mutagenicity 2 H341 Carcinogenicity 2 H351 Acute hazards to the aquatic environment 1 H400

Section 4. First aid measures

Inhalation:	Move to fresh air, consult doctor if complaint persists.
Skin contact:	Do not pull bonded skin apart. It may be gently peeled apart using a blunt object such as a spoon, preferably after soaking in warm soapy water. Cyanoacrylates give off heat on solidification. In rare cases a large drop will generate enough heat to cause a burn. Burns should be treated normally after the adhesive has been removed from the skin. If lips are accidentally stuck together apply warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips apart with direct opposing action.
Eye contact:	If the eye is bonded closed, release eyelashes with warm water by covering with wet pad. Cyanoacrylate will bond to eye protein and will cause periods of weeping which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Do not force eye open. Medical advice should be sought in case solid particles of cyanoacrylate trapped behind the eyelid cause any abrasive damage.
Ingestion:	Ensure that breathing passages are not obstructed. The product will polymerise immediately in the mouth making it almost impossible to swallow. Saliva will slowly separate the solidified product from the mouth (several hours).
Indication of immediate medical attention and special treatment needed:	See section: Description of first aid measures

Section 5. Fire fighting measures

Suitable extinguishing media: Foam, extinguishing powder, carbon dioxide.
Fine water spray

- Specific hazards arising from the chemical:** In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO₂) can be released. In case of fire, keep containers cool with water spray.
- Special protection equipment and precautions for firefighters:** Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).
- Hazardous combustion products:** Oxides of carbon, oxides of nitrogen, irritating organic vapors.

Section 6. Accidental release measures

- Personal precautions:** Ensure adequate ventilation.
- Environmental precautions:** Do not let product enter drains.
- Clean-up methods:** Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

Section 7. Handling and storage

- Handling:** Ventilation (low level) is recommended when using large volumes
Use of dispensing equipment is recommended to minimise the risk of skin or eye contact
- Storage:** For optimum shelf life store in original containers under refrigerated conditions at 2 - 8°C (35.6 - 46.4 °F)

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

HYDROQUINONE 123-31-9	Value type	Time Weighted Average (TWA):
	mg/m³	1
	Remarks	ACGIH
HYDROQUINONE 123-31-9	Value type	Time Weighted Average (TWA):
	mg/m³	2
	Remarks	MY OEL

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: The use of chemical resistant gloves such as Nitrile is recommended.
Polyethylene or polypropylene gloves are recommended when using large volumes.
Do not use PVC, rubber or nylon gloves.
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.
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: Wear protective glasses.
Protective eye equipment should conform to EN166.

Body protection: Protective clothing that covers arms and legs.
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. Do not eat, drink or smoke while working. Wash hands before work breaks and after finishing work.

Section 9. Physical and chemical properties

Appearance: Clear, Colorless, Straw
Liquid
Odor: No data available.
Odor threshold (CA): No data available.
pH: No data available.
Melting point / freezing point: No data available.

Specific gravity:	No data available.
Boiling point:	No data available.
Flash point:	80 °C (176 °F)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure:	< 700 mbar
(no method; 50 °C (122 °F))	
Vapor density:	No data available.
Density:	1.1 g/cm ³
Solubility:	No data available.
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content:	< 3.00 %
(2010/75/EC)	

Section 10. Stability and reactivity

Reactivity/Incompatible materials:	Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
Chemical stability:	Stable under recommended storage conditions.
Conditions to avoid:	Stable under normal conditions of storage and use.
Hazardous decomposition products:	carbon oxides.

Section 11. Toxicological information

Symptoms of Overexposure:	Prolonged or repeated contact may cause skin irritation. Prolonged or repeated contact may cause eye irritation.
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Acute oral toxicity:

Bis(3-ethyl-5-methyl-4-maleimidophenyl)methane 105391-33-1	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Value type	LD50
	Value	> 10,000 mg/kg
	Species	rat
	Method	
Hydroquinone 123-31-9	Value type	LD50
	Value	367 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Value type	LD50
	Value	> 10,000 mg/kg
	Species	rat
	Method	

Skin corrosion/irritation:

Bis(3-ethyl-5-methyl-4-maleimidophenyl)methane 105391-33-1	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Bis(3-ethyl-5-methyl-4-maleimidophenyl)methane 105391-33-1	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Bis(3-ethyl-5-methyl-4-maleimidophenyl)methane 105391-33-1	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Hydroquinone 123-31-9	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	

Germ cell mutagenicity:

Bis(3-ethyl-5-methyl-4-maleimidophenyl)methane 105391-33-1	Result	negative
	Type of study / Route of administration	bacterial gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	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)
Hydroquinone 123-31-9	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	EU Method B.13/14 (Mutagenicity)

Repeated dose toxicity:

Hydroquinone 123-31-9	Result	NOAEL=>= 250 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	14 days 5 days/week. 12 doses
	Species	rat
	Method	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Hydroquinone 123-31-9	Result	LOAEL=<= 500 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	14 days 5 days/week. 12 doses
	Species	rat
	Method	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

Section 12. Ecological information

General ecological information: Biological and Chemical Oxygen Demands (BOD and COD) are insignificant., Do not empty into drains / surface water / ground water.

Ecotoxicity: Harmful to aquatic life with long lasting effects.

Toxicity:

Bis(3-ethyl-5-methyl-4-maleimidophenyl)methane 105391-33-1	Value type	LC50
	Value	0.5 mg/l
	Acute Toxicity Study	Fish
	Exposure time	48 h
	Species	Oryzias latipes
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Value type	EC 50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Hydroquinone 123-31-9	Value type	LC50
	Value	0.638 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroquinone 123-31-9	Value type	EC50
	Value	0.134 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroquinone 123-31-9	Value type	EC50
	Value	0.335 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)
Hydroquinone 123-31-9	Value type	EC 50
	Value	0.038 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	
	Method	

Persistence and degradability:

Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Result	under test conditions no biodegradation observed
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Hydroquinone 123-31-9	Result	readily biodegradable
	Route of application	aerobic
	Degradability	75 - 81 %
	Method	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)

Bioaccumulative potential / Mobility in soil:

Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	LogKow	6.25
	Temperature	20 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Hydroquinone 123-31-9	LogKow	0.59
	Temperature	
	Method	EU Method A.8 (Partition Coefficient)

Section 13. Disposal considerations

Product

Method of disposal: Cured adhesive: Dispose of as water insoluble non-toxic solid chemical in authorised landfill or incinerate under controlled conditions.
Dispose of in accordance with local and national regulations.
Contribution of this product to waste is very insignificant in comparison to article in which it is used

Packaging

Disposal of uncleaned packages: Disposal must be made according to official regulations.

Section 14. Transport information

Road transport ADR:

Not dangerous goods

Railroad transport RID:

Not dangerous goods

Inland water transport ADN:

Not dangerous goods

Marine transport IMDG:

Not dangerous goods

Air transport IATA:

Class:	9
Packing group:	III
Packaging instructions (passenger):	964
Packaging instructions (cargo):	964
UN no.:	3334
Label:	9
Proper shipping name:	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
Additional Information:	Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.

Section 15. Regulatory information

Regulatory Information: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 [P.U.(A) 310/213]
Industry Code of Practice on Chemicals Classification and Hazard Communication

Global inventory status:

Regulatory list	Notification
TSCA	yes
NDSL	yes
KECI (KR)	yes
IECSC	yes

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.