Safety Data Sheet

LOCTITE 480

SDS No. : 153522
V001.1
Revision: 02.07.2020
printing date: 15.09.2022

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name: LOCTITE 480

Intended use: Cyanoacrylate

Supplier:

Henkel New Zealand Ltd
2 Allens Rd
Auckland, 2013
New Zealand
Phone: +64 (9) 272-6710

Emergency information: 24 HOUR EMERGENCY CONTACT NUMBER 0800 243 622

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classified as hazardous under the New Zealand Hazardous Substances and New Organisms Act (HSNO).
Not Classified as Dangerous Goods according to NZS 5433: 2012 and the Land Transport Rule: Dangerous Goods 2005.

GHS Classification:

Hazard Class	Hazard Category	Target organ
Flammable liquids	Category 4	
Skin irritation	Category 2	
Serious eye irritation	Category 2A	
Target Organ Systemic Toxicant - Single exposure	Category 3	respiratory tract irritation
Acute hazards to the aquatic environment	Category 3	
Chronic hazards to the aquatic environment	Category 3	

Hazard pictogram:

Signal word: Warning

Hazard statement(s):
H227 Combustible liquid.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statement(s):

Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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 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.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing.
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

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.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

General chemical description: Mixture

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Ethyl 2-cyanoacrylate	7085-85-0	60- <= 100 %
phthalic anhydride	85-44-9	<= 1 %
Hydroquinone	123-31-9	< 1 %
non hazardous ingredients~		10- <= 30 %

SECTION 4 FIRST AID MEASURES

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).

Skin:
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.

Eyes:	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.
Inhalation:	Move to fresh air, consult doctor if complaint persists.
First Aid facilities:	Eye wash and safety shower Normal washroom facilities
Medical attention and special treatment:	Treat symptomatically. Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Foam, extinguishing powder, carbon dioxide. Fine water spray
Improper extinguishing media:	High pressure waterjet
Combustion behaviour:	Combustible Liquid Keep away from heat, spark, and open flames.
Decomposition products in case of fire:	Thermal decomposition can lead to release of irritating gases and vapors. carbon monoxide Carbon dioxide. Oxides of nitrogen.
Special protective equipment for fire-fighters:	Wear full protective clothing. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Ensure adequate ventilation. Avoid skin and eye contact. Wear protective equipment.
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. Dispose of contaminated material as waste according to Section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:	Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.
Conditions for safe storage:	Store in a cool place in closed original container. 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

Workplace exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Ceiling	STEL (ppm)	STEL (mg/m3)
PHTHALIC ANHYDRIDE 85-44-9		1	16.1	-	-	-
HYDROQUINONE 123-31-9			2	-	-	-

Biological Exposure Indices:
None

Eye protection: Wear protective glasses.

Skin protection: Protective clothing that covers arms and legs.
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.

Respiratory protection: If inhalation risk exists, wear a respirator or air supplied mask complying with the requirements of AS/NZS 1715 and AS/NZS 1716.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black
Liquid
Odor: Sharp, Irritating
Specific gravity: 1.1
Boiling point: > 149 °C (> 300.2 °F)
Flash point: 80 - 93 °C (176 - 199.4 °F)
(Tagliabue closed cup)
Vapor pressure: < 0.5 mm hg
(; 25 °C (77 °F))
Vapor density: 3
Approximately
Density: 1.1 g/cm3
Auto ignition: 485 °C
Decomposition temperature:
VOC content: < 2 % < 20 g/l

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Conditions to avoid: Keep away from sources of ignition and naked flames.

Incompatible materials: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapors.

carbon monoxide
Carbon dioxide.
Oxides of nitrogen.

SECTION 11 TOXICOLOGICAL INFORMATION

Health Effects:

Ingestion: Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

Skin: Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.

Eyes: Irritating to eyes. Causes excessive tearing. Eyelids may bond.

Inhalation: Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	LD50 LD50	> 5,000 mg/kg > 2,000 mg/kg	oral dermal		rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
phthalic anhydride 85-44-9	LD50 LC50 LD50	1,530 mg/kg > 2.14 mg/l > 10,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	not specified OECD Guideline 403 (Acute Inhalation Toxicity) not specified
Hydroquinone 123-31-9	LD50 LD50	367 mg/kg > 2,000 mg/kg	oral dermal		rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	slightly irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hydroquinone 123-31-9	not irritating	24 h	rabbit	Weight of evidence

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	irritating	72 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
phthalic anhydride 85-44-9	highly irritating		rabbit	not specified

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	not sensitising		guinea pig	not specified
phthalic anhydride 85-44-9	sensitising	in vivo	guinea pig	not specified
phthalic anhydride 85-44-9	sensitising	Mouse local lymphnode assay (LLNA)	mouse	Mouse local lymphnode assay (LLNA)
Hydroquinone 123-31-9	sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Hydroquinone 123-31-9	sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to 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
Ethyl 2-cyanoacrylate 7085-85-0	negative negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay in vitro mammalian chromosome aberration test	with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
phthalic anhydride 85-44-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
Hydroquinone 123-31-9	negative negative positive	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay	with and without with and without with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydroquinone 123-31-9	positive negative positive	intraperitoneal oral: gavage intraperitoneal		mouse rat mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test) equivalent or similar to OECD Guideline 483 (Mammalian Spermatogonial Chromosome Aberration Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Hydroquinone 123-31-9	NOAEL=50 mg/kg	oral: gavage	13 w5 d/w	rat	not specified
Hydroquinone 123-31-9	NOAEL=73.9 mg/kg	dermal	13 w6 h/d, 5 d/w	rat	equivalent or similar to OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

SECTION 12. ECOLOGICAL INFORMATION

General ecological information: Do not empty into drains / surface water / ground water.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
phthalic anhydride 85-44-9	LC50	313 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
phthalic anhydride 85-44-9	NOEC	10 mg/l	Fish	60 d	no data	OECD Guideline 210 (fish early lite stage toxicity test)
phthalic anhydride 85-44-9	EC50	> 640 mg/l	Daphnia	48 h	Daphnia magna	other guideline:
phthalic anhydride 85-44-9	EC50	> 100 mg/l	Algae	72 h	not specified	OECD Guideline 201 (Alga, Growth Inhibition Test)
phthalic anhydride 85-44-9	NOEC	100 mg/l	Algae	72 h	not specified	OECD Guideline 201 (Alga, Growth Inhibition Test)
phthalic anhydride 85-44-9	EC50	> 1,000 mg/l	Bacteria	3 h	not specified	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
Hydroquinone 123-31-9	LC50	0.638 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroquinone 123-31-9	EC50	0.134 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroquinone 123-31-9	EC50	0.335 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroquinone 123-31-9	EC 50	0.038 mg/l	Bacteria	30 min		not specified

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Ethyl 2-cyanoacrylate 7085-85-0	not readily biodegradable.	aerobic	57 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
phthalic anhydride 85-44-9	readily biodegradable	aerobic	74 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Hydroquinone 123-31-9	readily biodegradable	aerobic	75 - 81 %	EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Ethyl 2-cyanoacrylate 7085-85-0	0.776				22 °C	EU Method A.8 (Partition Coefficient)
phthalic anhydride 85-44-9	1.6					EU Method A.8 (Partition Coefficient)
Hydroquinone 123-31-9	0.59					EU Method A.8 (Partition Coefficient)

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal of product: 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

Disposal for uncleaned package: 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.

SECTION 14. TRANSPORT INFORMATION

Dangerous Goods information:

Land Transport: Not Classified as Dangerous Goods according to NZS 5433: 2012 and the Land Transport Rule: Dangerous Goods 2005.

Marine transport IMDG:
Not dangerous goods

Air transport IATA:

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

`SECTION 15. REGULATORY INFORMATION

HSNO Approval Number: Group standard HSR002657

NZIoC: Compliant for NZIOC

SECTION 16. OTHER INFORMATION

Abbreviations/acronyms: STEL - Short term exposure limit
TWA - Time weighted average
HSNO - Hazardous Substances and New Organisms
IMDG: International Maritime Dangerous Goods code
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations

Reason for issue: Reviewed SDS. Reissued with new date. involved chapters: 1-16

Date of previous issue: 26.06.2020

Disclaimer:

The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel New Zealand Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel New Zealand Limited concerning the properties of the material.
The information contained in this Safety Data Sheet is offered in good faith and has been developed from what is believed to be accurate and reliable sources. The information is offered without warranty, representation, inducement or licence and Henkel New Zealand Limited assumes no legal responsibility for reliance upon same. Henkel New Zealand Limited disclaims any liability for loss, injury or damage incurred in connection with the use of the material or its associated Safety Data Sheet.
This information is not to be construed as a representation that the material is suitable for any particular purpose or use except those conditions and warranties implied by Government statutes. Customers are encouraged to make their own enquiries as to the material's characteristics and, where appropriate, to conduct their own tests in the specific context of the material's intended use.
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.