

**Safety Data Sheet**

Page 1 of 10

LOCTITE 577 50ML AU UPGRADE

SDS No. : 541371 V001.0

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**SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

<b>Product name:</b>	LOCTITE 577 50ML AU UPGRADE
<b>Intended use:</b>	Adhesive
<b>Supplier:</b>	Henkel New Zealand Ltd 2 Allens Rd Auckland, 2013 New Zealand Phone: +64 (9) 272-6710
<b>Emergency information:</b>	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 under the Land Transport Rule: Dangerous Goods 2005.

**GHS Classification:**

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Skin irritation	Category 2	
Serious eye irritation	Category 2A	
Skin sensitizer	Category 1	
Target Organ Systemic Toxicant - Single exposure	Category 3	respiratory tract irritation
Acute hazards to the aquatic environment	Category 3	

**Hazard pictogram:****Signal word:**

Warning

**Hazard statement(s):** H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H402 Harmful to aquatic life.

**Precautionary Statement(s):**

**Prevention:** P261 Avoid breathing mist/vapours.  
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.

**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**

**General chemical description:** Mixture

**Identity of ingredients:**

Chemical ingredients	CAS-No.	Proportion
Tetramethylene dimethacrylate	2082-81-7	10- < 20 %
2,2'-Ethylenedioxydiethyl dimethacrylate	109-16-0	1- < 10 %
Ethene, homopolymer	9002-88-4	1- < 10 %
Silica, amorphous, fumed, cryst.-free	112945-52-5	1- < 10 %
Acetic acid, 2-phenylhydrazide	114-83-0	0.1- < 1 %
$\alpha$ , $\alpha$ -dimethylbenzyl hydroperoxide	80-15-9	0.1- < 1 %
maleic acid	110-16-7	0.1- < 1 %
non hazardous ingredients~		30- <= 60 %

**SECTION 4 FIRST AID MEASURES**

**Ingestion:** Do not induce vomiting.  
Have victim rinse mouth thoroughly with water. Seek medical advice, symptomatic treatment.

**Skin:** Rinse with running water and soap.  
Remove contaminated clothing and footwear.  
If skin irritation persists, call a physician.

<b>Eyes:</b>	Wash with plenty of water immediately and continue for several minutes, holding eyelid open. Consult a doctor.
<b>Inhalation:</b>	Move to fresh air. If symptoms persist, seek medical advice.
<b>First Aid facilities:</b>	Eye wash Normal washroom facilities
<b>Medical attention and special treatment:</b>	Treat symptomatically.

#### SECTION 5. FIRE FIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Carbon dioxide, foam, powder
<b>Improper extinguishing media:</b>	Water spray jet
<b>Decomposition products in case of fire:</b>	Thermal decomposition may release toxic and/or hazardous gases. Carbon dioxide. carbon monoxide Irritating fumes.
<b>Particular danger in case of fire:</b>	In case of fire, keep containers cool with water spray.
<b>Special protective equipment for fire-fighters:</b>	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA). Wear full protective clothing.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Avoid skin and eye contact. Ensure adequate ventilation.  Wear adequate personal protective clothing and equipment. Keep unnecessary personnel away.
<b>Environmental precautions:</b>	Do not allow spill to enter sewage systems or open bodies of water.
<b>Clean-up methods:</b>	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.

#### SECTION 7. HANDLING AND STORAGE

<b>Precautions for safe handling:</b>	Use only in well-ventilated areas. Avoid breathing vapors or mists of this product. Avoid skin and eye contact. Wear suitable protective clothing, safety glasses and gloves.
<b>Conditions for safe storage:</b>	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.

**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)
PARTICULATES NOT OTHERWISE CLASSIFIED, RESPIRABLE DUST 9002-88-4	Respirable dust.		3	-	-	-
PARTICULATES NOT OTHERWISE CLASSIFIED, INHALABLE DUST	Inhalable dust.		10	-	-	-
Particulates not otherwise classified, respirable dust Respirable dust (not otherwise classified) 112945-52-5	Respirable dust.		3	-	-	-
Particulates not otherwise classified, inhalable dust Inhalable dust (not otherwise classified)	Inhalable dust.		10	-	-	-

**Biological Exposure Indices:**

None

**Eye protection:**

Safety goggles or safety glasses with side shields.

**Skin protection:**

Use impermeable gloves and protective clothing as necessary to prevent skin contact.

Neoprene gloves.

Butyl rubber gloves.

Natural rubber gloves.

**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:** yellow  
high viscosity

**Odor:** Mild

**pH:** Not applicable, Product is non-polar/ aprotic. Not available.

**Melting point / freezing point:** > 150 °C (> 302 °F)

**Boiling point:** > 100 °C (> 212 °F)

**Flash point:** (no method)

**Vapor pressure:** < 0.13 mbar  
(; 20 °C (68 °F))

**Vapor density:** > 1

**Density:** 1.15 - 1.2 g/cm3

**SECTION 10. STABILITY AND REACTIVITY**

**Conditions to avoid:**

Extremes of temperature.

**Incompatible materials:** Reacts with strong oxidants.  
Will attack some forms of plastic, rubber, and coatings.

**Hazardous decomposition products:** Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.  
  
carbon monoxide  
carbon dioxide

**SECTION 11 TOXICOLOGICAL INFORMATION**

**Health Effects:**  
**Ingestion:** Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.  
**Skin:** May cause allergic skin reaction.  
 Causes skin irritation.  
**Eyes:** Causes eye irritation.  
**Inhalation:** Inhalation of product mist may cause irritation of the nose, throat, and respiratory tract.

**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
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LD50 Acute toxicity estimate (ATE) Acute toxicity estimate (ATE)	10,837 mg/kg 28.17 mg/l > 5,000 mg/kg	oral inhalation dermal		rat	not specified Expert judgement Expert judgement
Ethene, homopolymer 9002-88-4	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	4 h		Expert judgement Expert judgement Expert judgement
Silica, amorphous, fumed, cryst.-free 112945-52-5	LD50 LC0 LD50	> 5,000 mg/ kg 0.139 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) not specified OECD Guideline 402 (Acute Dermal Toxicity)
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified
α, α- dimethylbenzyl hydroperoxide 80-15-9	LD50 LC50 Acute toxicity estimate (ATE)	382 mg/kg 1.370 mg/l 1,100 mg/kg	oral inhalation dermal	4 h	rat rat	other guideline: not specified Expert judgement
maleic acid 110-16-7	LD50 LD50	708 mg/kg 1,560 mg/kg	oral  dermal		rat rabbit	not specified not specified

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	not irritating	24 h	rabbit	Draize Test
Silica, amorphous, fumed, cryst.-free 112945-52-5	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
$\alpha$ , $\alpha$ -dimethylbenzyl hydroperoxide 80-15-9	corrosive		rabbit	Draize Test
maleic acid 110-16-7	irritating	24 h	human	Patch Test

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Ethene, homopolymer 9002-88-4	not irritating	24 h	rabbit	FDA Guideline
Silica, amorphous, fumed, cryst.-free 112945-52-5	not irritating		rabbit	OECD Guideline 405 (Acute 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)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Ethene, homopolymer 9002-88-4	not 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)

**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)
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	negative negative negative	mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test) in vitro mammalian cell micronucleus 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 487 (In vitro Mammalian Cell Micronucleus Test)
Ethene, homopolymer 9002-88-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		Ames Test
Silica, amorphous, fumed, cryst.-free 112945-52-5	negative negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro			not specified not specified not specified
$\alpha$ , $\alpha$ -dimethylbenzyl hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
$\alpha$ , $\alpha$ -dimethylbenzyl hydroperoxide 80-15-9	negative	dermal		mouse	not specified
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
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	NOAEL=1,000 mg/kg	oral: gavage	daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
$\alpha$ , $\alpha$ -dimethylbenzyl hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified
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)

**General ecological information:**

Do not empty into drains / surface water / ground water., Cured Loctite products are typical polymers and do not pose any immediate environmental hazards.

**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 2,2'-	NOEC	20 mg/l	Bacteria	28 d	activated sludge, domestic	not specified
Ethylendioxydiethyl dimethacrylate 109-16-0 2,2'-	LC50	16.4 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethylendioxydiethyl dimethacrylate 109-16-0 2,2'-	EC50	> 100 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethylendioxydiethyl dimethacrylate 109-16-0	NOEC	18.6 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethene, homopolymer 9002-88-4	LC50	> 100 mg/l	Fish	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethene, homopolymer 9002-88-4	EC0	> 1,000 mg/l	Bacteria	3 h	not specified	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Silica, amorphous, fumed, cryst.-free 112945-52-5	LC50	> 10,000 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity 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	18.84 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9 α, α-	EC50	3.1 mg/l	Algae	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9 α, α-	NOEC	1 mg/l	Algae	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test) not specified
α, α-dimethylbenzyl hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min	not specified	not specified
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)



**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))
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	readily biodegradable	aerobic	85 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Ethene, homopolymer 9002-88-4	not readily biodegradable.	aerobic	1 %	ISO 10708 (BODIS-Test)
$\alpha$ , $\alpha$ -dimethylbenzyl hydroperoxide 80-15-9	not readily biodegradable.	aerobic	3 %	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)

**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)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	2.3					OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
Acetic acid, 2- phenylhydrazide 114-83-0	0.74					not specified
$\alpha$ , $\alpha$ -dimethylbenzyl hydroperoxide 80-15-9		9.1		calculation		OECD Guideline 305 (Bioconcentration: Flow- through Fish Test)
$\alpha$ , $\alpha$ -dimethylbenzyl hydroperoxide 80-15-9	1.6				25 °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)

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Waste disposal of product:** Dispose of in accordance with local and national regulations.

**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 under the Land Transport Rule: Dangerous Goods 2005.

**Marine transport IMDG:**

Not dangerous goods

**Air transport IATA:**  
Not dangerous goods

**SECTION 15. REGULATORY INFORMATION**

**New Zealand regulatory information:**

Classified as hazardous under the New Zealand Hazardous Substances and New Organisms Act (HSNO).

**HSNO Approval Number:** HSR002670

**NZIoC:** Compliant for NZIOC

**SECTION 16. OTHER INFORMATION**

**Abbreviations/acronyms:** HSNO - Hazardous Substances and New Organisms  
CAS: Chemical Abstracts Service  
GHS: Globally Harmonized System  
IMDG: International Maritime Dangerous Goods code

**Reason for issue:** First issue. involved chapters: 1-16

**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.

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