



Safety Data Sheet

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LOCTITE AA 324 STRUCTURAL ADHESIVE
known as (LOCTITE 324 SPEEDBONDER)

MSDS-No. : 153503
V000.0
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Section 1. Identification of the substance/preparation and of the company/undertaking

Product name: LOCTITE AA 324 STRUCTURAL ADHESIVE
known as (LOCTITE 324 SPEEDBONDER)

Intended use: Acrylic Adhesive

Supplier:
Henkel Australia Pty Ltd
135-141 Canterbury Road
Kilsyth, Victoria, 3137
Australia

Phone: +61 (3) 9724 6444

Emergency information: 24 HOUR EMERGENCY CONTACT NUMBER: 1800 032 379

Section 2. Hazards identification

Classification of the substance or mixture

Hazardous according to the criteria of Safe Work Australia.

GHS Classification:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Flammable liquids	Category 4	
Skin irritation	Category 2	
Serious eye damage/eye irritation	Category 1	
Skin sensitizer	Category 1	
Target Organ Systemic Toxicant - Single exposure	Category 3	respiratory tract irritation
Chronic hazards to the aquatic environment	Category 3	

Hazard pictogram:



Signal word: Danger

Hazard statement(s):	H227 Combustible liquid. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. 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. 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+P315 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Get immediate medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362 Take off contaminated clothing. P370+P378 In case of fire: Use CO ₂ , dry chemical, or 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, and product characteristics at time of disposal.

Classification of material Xi - Irritant

Risk phrases:

R36/37/38 Irritating to eyes, respiratory system and skin.
R43 May cause sensitisation by skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S23 Do not breathe gas/fumes/vapour/spray.
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of water and soap.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S46 If swallowed, seek medical advice immediately and show this container or label.
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

Dangerous Goods information:

Not classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

Signal word:

HAZARDOUS

Section 3. Composition / information on ingredients

General chemical description: Mixture
Type of preparation: Methacrylates

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
2-Hydroxyethyl methacrylate	868-77-9	10- 30 %
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate	7534-94-3	10- 30 %
Methacrylic acid, monoester with propane-1,2-diol	27813-02-1	< 5 %
Tert-butyl perbenzoate	614-45-9	< 5 %
Acrylic acid	79-10-7	< 3 %
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.

Skin: Rinse with running water and soap.
Seek medical advice.

Eyes: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get immediate medical attention.

Inhalation: Move to fresh air.
Keep warm and in a quiet place.
Seek medical advice.

First Aid facilities: Eye wash and safety shower
Normal washroom facilities

Medical attention and special treatment: Treat symptomatically.

Section 5. Fire fighting measures

Suitable extinguishing media: Carbon dioxide, foam, powder

Decomposition products in case of fire:: Thermal decomposition can lead to release of irritating gases and vapors.
Carbon monoxide.
Carbon dioxide.
Oxides of nitrogen.
Hydrogen cyanide.
Amines.
Isocyanates.

Particular danger in case of fire:: Combustible Liquid

Special protective equipment for fire-fighters: Wear full protective clothing.
Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

Additional fire fighting advice: In case of fire, keep containers cool with water spray.
Collect contaminated fire fighting water separately. It must not enter drains.

Section 6. Accidental release measures

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

Section 7. Handling and storage

- Precautions for safe handling:** Use only in well-ventilated areas.
Avoid skin and eye contact.
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.
Avoid naked flames, sparking and sources of ignition.
- Conditions for safe storage:** 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.
Refer to AS 1940: The Storage and Handling of Flammable and Combustible Liquids.

Section 8. Exposure controls / personal protection

National exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Peak Limit. (ppm)	Peak Limit. (mg/m3)	STEL (ppm)	STEL (mg/m3)
ACRYLIC ACID 79-10-7		2	5.9	-	-	-	-

- Engineering controls:** Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
- Eye protection:** Wear protective glasses.
- Skin protection:** Wear suitable protective clothing.
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.
- 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:** Light amber
viscous, liquid
- Odor:** characteristic
- Specific gravity:** 1.1
- Boiling point:** > 149 °C (> 300.2 °F)

Flash point: (Tagliabue closed cup)	90 °C (194 °F)
Lower explosive limit:	2 % (V) (Acrylic Acid)
Upper explosive limit:	8 % (V) (Acrylic Acid)
Vapor pressure: (; 27 °C (80.6 °F))	< 10 mm hg
Density:	1.1 g/cm ³
Solubility in water:	Slight (20 °C)
VOC content:	2.26 % 21.54 g/l

Section 10. Stability and reactivity

Stability:	Stable under normal conditions of temperature and pressure.
Conditions to avoid:	Exposure to sunlight. Keep away from heat, spark and flame. Store away from incompatible materials.
Incompatible materials:	Reaction with strong acids. Reacts with strong oxidants.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide. Carbon dioxide. Oxides of nitrogen. Hydrogen cyanide. Amines. Isocyanates.
Hazardous polymerization:	Will not occur.

Section 11. Toxicological information

Health Effects:**Ingestion:**

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Skin:

Causes skin irritation.

Symptoms may include redness, edema, drying, defatting and cracking of the skin.

May cause allergic skin reaction.

Eyes:

Causes serious eye damage.

Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Inhalation:

This product is irritating to the respiratory system.

May cause irritation to nose and throat.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 3,000 mg/kg	dermal		rabbit	OECD Guideline 401 (Acute Oral Toxicity)
Methacrylic acid, monoester with propane- 1,2-diol	LD50	> 2,000 mg/kg	oral		rat	
27813-02-1	LD50	> 5,000 mg/kg	dermal		rabbit	
Tert-butyl perbenzoate 614-45-9	LD50	4,838 mg/kg	oral		rat	
	LC50	> 1.01 mg/l	inhalation		Not specified	
	LD50	3,817 mg/kg	dermal		rat	
Acrylic acid 79-10-7	LD50	1,500 mg/kg	oral	4 h	rat	BASF Test OECD Guideline 403 (Acute Inhalation Toxicity) BASF Test
	LC50	> 5.1 mg/l	inhalation		rat	
	LD50	640 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	highly corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	corrosive	21 d	rabbit	BASF Test

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Acrylic acid 79-10-7	not sensitising	Skin painting test	guinea pig	

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	negative positive	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test	with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Acrylic acid 79-10-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		

Section 12. Ecological information

General ecological information: Do not empty into drains / surface water / ground water.**Ecotoxicity:** Harmful to aquatic life with long lasting effects.**Toxicity:**

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LC50	227 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	NOEC	160 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	345 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
exo-1,7,7- trimethylbicyclo[2.2.1]hept-2- yl methacrylate 7534-94-3	LC50	1.79 mg/l	Fish	96 h		OECD Guideline 203 (Fish, Acute Toxicity Test)
exo-1,7,7- trimethylbicyclo[2.2.1]hept-2- yl methacrylate 7534-94-3	EC50	1.1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
exo-1,7,7- trimethylbicyclo[2.2.1]hept-2- yl methacrylate 7534-94-3	EC50	2.66 mg/l	Algae	96 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	LC50	493 mg/l	Fish	48 h	Leuciscus idus melanotus	DIN 38412-15
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Tert-butyl perbenzoate 614-45-9	LC50	1.6 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Tert-butyl perbenzoate 614-45-9	EC50	11 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Tert-butyl perbenzoate 614-45-9	NOEC	0.72 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tert-butyl perbenzoate 614-45-9	EC50	0.8 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Acrylic acid 79-10-7	LC50	27 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Acrylic acid 79-10-7	EC10	0.03 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Acrylic acid 79-10-7	EC50	0.13 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3			26.8 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	readily biodegradable	aerobic	94.2 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Tert-butyl perbenzoate 614-45-9	readily biodegradable, but failing 10-day window	aerobic	72 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Acrylic acid 79-10-7	readily biodegradable	aerobic	81 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	5.09					OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	0.97					
Acrylic acid 79-10-7		3.16				
Acrylic acid 79-10-7	0.46				25 °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**Road and Rail Transport:**

Dangerous Goods information: Not classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

Marine transport IMDG:

Not dangerous goods

Air transport IATA:
Not dangerous goods

Section 15. Regulatory information

SUSMP Poisons Schedule None

Section 16. Other information

Abbreviations/acronyms: TWA - Time weighted average
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
STEL - Short term exposure limit
ADGC - Australian Dangerous Goods Code
IMDG: International Maritime Dangerous Goods code

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