



Safety Data Sheet

Page 1 of 9

UV GLASS BONDER 349 BULK

MSDS-No. : 153570

V001.3

Date of issue: 29.06.2015

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

Product name: UV GLASS BONDER 349 BULK

Intended use: Ultraviolet 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> |
|--|------------------------|------------------------------|
| 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): | 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: | 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, clothing, eye 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. |
| 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:

R37/38 Irritating to respiratory system and skin.
R41 Risk of serious damage to eyes.
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: UV curing acrylic adhesive

Identity of ingredients:

| Chemical ingredients | CAS-No. | Proportion |
|---|------------|------------|
| exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate | 7534-94-3 | < 20 % |
| Methacrylic acid, monoester with propane-1,2-diol | 27813-02-1 | < 20 % |
| Lauryl methacrylate | 142-90-5 | < 10 % |
| Acrylic acid | 79-10-7 | < 5 % |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane | 2530-83-8 | < 3 % |
| Hexadecyl methacrylate | 2495-27-4 | < 3 % |
| Tetradecyl methacrylate | 2549-53-3 | < 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.

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: Protect from direct sunlight.
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

National exposure standards:

| Ingredient [Regulated substance] | form of exposure | TWA (ppm) | TWA (mg/m ³) | Peak Limit. (ppm) | Peak Limit. (mg/m ³) | STEL (ppm) | STEL (mg/m ³) |
|----------------------------------|------------------|-----------|--------------------------|-------------------|----------------------------------|------------|---------------------------|
| ACRYLIC ACID 79-10-7 | | 2 | 5.9 | - | - | - | - |

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

Eye protection: For eye protection, use tightly fitted safety goggles and a face-shield

Skin protection: Wear suitable protective clothing.
The use of chemical resistant gloves such as Neoprene or Natural Rubber 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: Clear
Liquid

Odor: Sharp, Irritating

Specific gravity: 1.02

Boiling point: > 149 °C (> 300.2 °F)

Flash point: > 93.3 °C (> 199.94 °F)
(Tagliabue closed cup)

Vapor pressure: < 10 mm hg
(; 27 °C (80.6 °F))

Density: 1.05 - 1.1 g/cm³

Solubility in water: Slight

VOC content: 1.82 % 17.37 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. |
| 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 |
|--|---------------|---------------|-------------------------|------------------|---------|--|
| Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1 | LD50 | > 2,000 mg/kg | oral | 4 h | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| | LD50 | > 5,000 mg/kg | dermal | | rabbit | |
| Acrylic acid 79-10-7 | LD50 | 1,500 mg/kg | oral | 4 h | rat | BASF Test OECD Guideline 403 (Acute Inhalation Toxicity) |
| | LC50 | > 5.1 mg/l | inhalation | | rat | |
| | LD50 | 640 mg/kg | dermal | | rabbit | |
| [3-(2,3- Epoxypropoxy)propyl]tri methoxysilane 2530-83-8 | LD50 | 8,025 mg/kg | oral | 4 h | rat | BASF Test OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity) |
| | LC50 | > 5.3 mg/l | inhalation | | rat | |
| | LD50 | 4,250 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) |
| [3-(2,3- Epoxypropoxy)propyl]tri methoxysilane 2530-83-8 | not irritating | 24 h | 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 |
| [3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8 | highly irritating | 20 s | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

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 | |
| [3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8 | not sensitising | Buehler test | 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 |
|---|--|--|--|---------|---|
| Acrylic acid 79-10-7 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | |
| [3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8 | A Mutagenic potential cannot be excluded. | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| [3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8 | A Mutagenic potential cannot be excluded. | | | mouse | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |

Repeated dose toxicity:

| Hazardous components CAS-No. | Result | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---|----------------------|-------------------------|--|---------|--|
| [3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8 | NOAEL=500 mg/kg | oral: unspecified | 28 d | rat | OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents) |
| [3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8 | NOAEL=0.225 mg/kg | inhalation | 14 d | rat | OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day) |

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 |
|--|---------------|------------|----------------------------|------------------|---|--|
| 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) |
| 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) |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8 | LC50 | 55 mg/l | Fish | 96 h | Cyprinus carpio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8 | EC50 | 473 mg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8 | NOEC | 53 mg/l | Algae | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8 | EC50 | 255 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 |
|---------------------------------|--------|-------------------------|---------------|--------|
|---------------------------------|--------|-------------------------|---------------|--------|

| | | | | |
|--|-----------------------|---------|--------|--|
| 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) |
| Acrylic acid 79-10-7 | readily biodegradable | aerobic | 81 % | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8 | | aerobic | 37 % | OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away 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).

General information:

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

Reason for issue:

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

Date of previous issue:

20.02.2012

Disclaimer:

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