

**3M™ Single Bond Universal Adhesive Refill -  
Vial, 41282, 5ml**

Version	Revision Date:	SDS Number:	Date of last issue: -
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**Section 1: Identification**

**Product identifier** : 3M™ Single Bond Universal Adhesive Refill - Vial, 41282, 5ml

Product code : 00000007100006774

**Manufacturer or supplier's details**

Company : KCI Medical Asia Pte. Ltd.

Address : Ang Mo Kio Street 65 10  
Singapore 01 569059

Telephone : +6560384500

Emergency telephone : In case of emergency call CHEMTREC US: 1-800-424-9300,  
CHEMTREC WORLD: 1-703-527-3887.

E-mail address : psops\_supportteam@solventum.com

Website : Solventum.com

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**Section 2: Hazard identification****Classification of the substance or mixture**

Flammable liquids : Category 3

Serious eye damage/eye irritation : Category 2

Skin sensitization : Category 1

Reproductive toxicity : Category 1B

**GHS Label elements, including precautionary statements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H360 May damage fertility or the unborn child.

Precautionary Statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read

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and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P261 Avoid breathing mist or vapors.

P264 Wash skin thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Additional Labeling**

The following percentage of the mixture consists of ingredient(s) with unknown acute oral toxicity: 1.8639 %

The following percentage of the mixture consists of ingredient(s) with unknown acute dermal toxicity: 1.8639 %

The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 1.8639 %

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 22.5195 %

**Other hazards which do not result in classification**

None known.

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**Section 3: Composition/information on ingredients**
**Components**

Chemical name	CAS-No.	Concentration (% w/w)
2-hydroxyethyl methacrylate	868-77-9	20 -30
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	20 -30
ethanol	64-17-5	10 -20
ethyl 4-dimethylaminobenzoate	10287-53-3	1 -2.5
2-dimethylaminoethyl methacrylate	2867-47-2	0.1 -1
2,6-di-tert-butyl-p-cresol	128-37-0	0.1 -0.25

**Section 4: First-aid measures**
**Description of necessary first-aid measures**

- General advice : Move out of dangerous area.  
Show this material safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.

**Most important symptoms and effects, both acute and delayed**

- Risks : May cause an allergic skin reaction.  
Causes serious eye irritation.  
May damage fertility or the unborn child.

**Indication of any immediate medical attention and special treatment needed**

- Treatment : Treat symptomatically.

**Section 5: Fire-fighting measures**
**Extinguishing media**

- Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

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Unsuitable extinguishing media : High volume water jet

**Special hazards arising from the substance or mixture**

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

**Special protective actions for fire-fighters**

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

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**Section 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Environmental precautions**

Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

**Methods and materials for containment and cleaning up**

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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**Section 7: Handling and storage****Precautions for safe handling**

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

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Keep away from open flames, hot surfaces and sources of ignition.

- Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapors/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Take precautionary measures against static discharges.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Open drum carefully as content may be under pressure.  
Dispose of rinse water in accordance with local and national regulations.  
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

**Conditions for safe storage, including any incompatibilities**

- Conditions for safe storage : No smoking.  
Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : No decomposition if stored and applied as directed.

**Section 8: Exposure controls/personal protection**
**Control parameters**
**Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethanol	64-17-5	PEL (long term)	1,000 ppm 1,880 mg/m <sup>3</sup>	SG OEL
		STEL	1,000 ppm	ACGIH
2,6-di-tert-butyl-p-cresol	128-37-0	PEL (long term)	10 mg/m <sup>3</sup>	SG OEL
		TWA (Inhalable fraction and vapor)	2 mg/m <sup>3</sup>	ACGIH

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**Individual protection measures, such as personal protective equipment (PPE)**

Eye/face protection	:	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hand protection	:	
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.

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**Section 9: Physical and chemical properties**

Appearance	:	liquid
Color	:	yellow
Odor	:	Honey
Boiling point/boiling range	:	78 °C
Flash point	:	30.5 °C
Relative density	:	1.1
Density	:	1.1 g/cm <sup>3</sup>

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**Section 10: Stability and reactivity**

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	The product is chemically stable. No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur. No decomposition if stored and applied as directed. Vapors may form explosive mixture with air.
Conditions to avoid	:	Heat. Heat, flames and sparks.
Incompatible materials	:	None known. Not applicable
Hazardous decomposition products	:	No hazardous decomposition products are known.

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**Section 11: Toxicological information****Acute toxicity**

Not classified due to lack of data.

**Components:****2-hydroxyethyl methacrylate:**

Acute oral toxicity : LD50 (Rat): 5,564 mg/kg  
Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

**(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate:**

Acute oral toxicity : LD50 (Rat): &gt; 5,000 mg/kg

**ethanol:**

Acute oral toxicity : LD50 (Rat): 10,470 mg/kg  
Method: OECD Test Guideline 401  
Acute inhalation toxicity : LC50 (Rat, male): 116.9 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Acute dermal toxicity : LD50 (Rabbit): > 15,800 mg/kg

**ethyl 4-dimethylaminobenzoate:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 401  
Assessment: The substance or mixture has no acute oral toxicity  
Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

**2-dimethylaminoethyl methacrylate:**

Acute oral toxicity : LD50 (Rat): 1,550 mg/kg  
Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402

**2,6-di-tert-butyl-p-cresol:**

Acute oral toxicity : LD50 (Rat): > 6,000 mg/kg  
Method: OECD Test Guideline 401  
Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402

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Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Product:**

Species	:	Rabbit
Assessment	:	No skin irritation
Remarks	:	Not classified
Remarks	:	May cause skin irritation and/or dermatitis.

**Components:****2-hydroxyethyl methacrylate:**

Result	:	Skin irritation
Remarks	:	Based on national or regional regulation.

**ethanol:**

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

**ethyl 4-dimethylaminobenzoate:**

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

**2-dimethylaminoethyl methacrylate:**

Species	:	Rabbit
Result	:	Corrosive after 3 minutes to 1 hour of exposure

**2,6-di-tert-butyl-p-cresol:**

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
Remarks	:	Based on data from similar materials

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Product:**

Species	:	Rabbit
Remarks	:	May cause irreversible eye damage.

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**Components:****2-hydroxyethyl methacrylate:**

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days

**ethanol:**

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days  
Method : OECD Test Guideline 405

**ethyl 4-dimethylaminobenzoate:**

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405

**2-dimethylaminoethyl methacrylate:**

Species : Rabbit  
Result : Irreversible effects on the eye

**2,6-di-tert-butyl-p-cresol:**

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405  
Remarks : Based on data from similar materials

**Respiratory or skin sensitization****Skin sensitization**

May cause an allergic skin reaction.

**Respiratory sensitization**

Not classified due to lack of data.

**Product:**

Remarks : Causes sensitization.

**Components:****2-hydroxyethyl methacrylate:**

Assessment : Probability or evidence of skin sensitization in humans  
Remarks : Based on national or regional regulation.

**(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate:**

Assessment : Probability or evidence of skin sensitization in humans

Test Type : Maximization Test  
Routes of exposure : Skin contact

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Species : Guinea pig  
Result : positive

**ethanol:**

Test Type : Mouse ear swelling test (MEST)  
Routes of exposure : Skin contact  
Species : Mouse  
Result : negative

**ethyl 4-dimethylaminobenzoate:**

Test Type : Maximization Test  
Routes of exposure : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

**2-dimethylaminoethyl methacrylate:**

Assessment : Probability or evidence of low to moderate skin sensitization rate in humans

Test Type : Maximization Test  
Routes of exposure : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : positive

**2,6-di-tert-butyl-p-cresol:**

Test Type : Human repeat insult patch test (HRIPT)  
Routes of exposure : Skin contact  
Species : Humans  
Result : negative

**Germ cell mutagenicity**

Not classified due to lack of data.

**Components:****2-hydroxyethyl methacrylate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative

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**(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate:**

Genotoxicity in vitro :  
Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

**ethanol:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Rat  
Application Route: Ingestion  
Result: negative

**ethyl 4-dimethylaminobenzoate:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: positive

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative

**2-dimethylaminoethyl methacrylate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476

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Result: negative

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative

**2,6-di-tert-butyl-p-cresol:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Result: negativeTest Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Ingestion  
Result: negative

**Carcinogenicity**

Not classified due to lack of data.

**Components:****2-hydroxyethyl methacrylate:**

Species : Rat  
Application Route : Inhalation  
Exposure time : 102 Weeks  
Method : OECD Test Guideline 451  
Result : negative  
Remarks : Based on data from similar materials

**2,6-di-tert-butyl-p-cresol:**

Species : Rat  
Application Route : Ingestion  
Exposure time : 22 Months  
Result : negative

**Reproductive toxicity**

May damage fertility or the unborn child.

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**Components:****2-hydroxyethyl methacrylate:**

- Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative
- Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rabbit  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative  
Remarks: Based on data from similar materials

**ethanol:**

- Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Mouse  
Application Route: Ingestion  
Result: negative

**ethyl 4-dimethylaminobenzoate:**

- Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: positive
- Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative
- Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

**2-dimethylaminoethyl methacrylate:**

- Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative
- Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion

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Method: OECD Test Guideline 414  
Result: negative

**2,6-di-tert-butyl-p-cresol:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

**STOT-single exposure**

Not classified due to lack of data.

**STOT-repeated exposure**

Not classified due to lack of data.

**Components:****2,6-di-tert-butyl-p-cresol:**

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

**Aspiration toxicity**

Not classified due to lack of data.

**Further information****Product:**

Remarks : Solvents may degrease the skin.

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**Section 12: Ecological information****Toxicity****Components:****2-hydroxyethyl methacrylate:**

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 380 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 836 mg/l  
Exposure time: 72 h

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Method: OECD Test Guideline 201

NOEC (Selenastrum capricornutum (green algae)): 400 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 24.1 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211Toxicity to microorganisms : EC0: > 3,000 mg/l  
Exposure time: 16 h**(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate:****Ecotoxicology Assessment**

Acute aquatic toxicity : Toxic effects cannot be excluded

Chronic aquatic toxicity : Toxic effects cannot be excluded

**ethanol:**Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 14,200 mg/l  
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 5,012 mg/l  
Exposure time: 48 hToxicity to algae/aquatic plants : EC10 (Chlorella vulgaris (Fresh water algae)): 11.5 mg/l  
Exposure time: 72 hErC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l  
Exposure time: 72 hToxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Japanese medaka)): >= 79 mg/l  
Exposure time: 100 dToxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 9.6 mg/l  
Exposure time: 9 dToxicity to microorganisms : EC50 (Protozoa): 5,800 mg/l  
Exposure time: 4 h**ethyl 4-dimethylaminobenzoate:**Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.9 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.5 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

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Toxicity to algae/aquatic plants : EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.71 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

ErC50 (Raphidocelis subcapitata (freshwater green alga)): 2.8 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

**2-dimethylaminoethyl methacrylate:**

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): 19.1 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 33 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOEC (Scenedesmus capricornutum (fresh water algae)): 32 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

ErC50 (Scenedesmus capricornutum (fresh water algae)): 69.7 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 4.35 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC10 (Pseudomonas putida): 211 mg/l  
Exposure time: 17 h  
Method: DIN 38 412 Part 8

**2,6-di-tert-butyl-p-cresol:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 0.57 mg/l  
Exposure time: 96 h  
Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.48 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.24 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

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ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.24 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1  
Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Japanese medaka)): 0.053 mg/l  
Exposure time: 30 d  
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.316 mg/l  
Exposure time: 21 d  
M-Factor (Chronic aquatic toxicity) : 1  
Toxicity to microorganisms : EC50: > 10,000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

**Persistence and degradability**
**Components:**
**2-hydroxyethyl methacrylate:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 92 %  
Exposure time: 14 d  
Method: OECD Test Guideline 301C

**ethanol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 84 %  
Exposure time: 20 d

**ethyl 4-dimethylaminobenzoate:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 40 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

**2-dimethylaminoethyl methacrylate:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 95.3 %  
Exposure time: 28 d

**2,6-di-tert-butyl-p-cresol:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 4.5 %  
Exposure time: 28 d

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Method: OECD Test Guideline 301C

**Bioaccumulative potential****Components:****2-hydroxyethyl methacrylate:**Partition coefficient: n-  
octanol/water : log Pow: 0.42**(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate:**Partition coefficient: n-  
octanol/water : log Pow: 4.1**ethanol:**Partition coefficient: n-  
octanol/water : log Pow: -0.35**ethyl 4-dimethylaminobenzoate:**Partition coefficient: n-  
octanol/water : log Pow: 3.2  
Method: OECD Test Guideline 117**2-dimethylaminoethyl methacrylate:**Partition coefficient: n-  
octanol/water : log Pow: 1.13**2,6-di-tert-butyl-p-cresol:**Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 330 - 1,800Partition coefficient: n-  
octanol/water : log Pow: 5.1**Mobility in soil**

No data available

**Other adverse effects****Product:**Additional ecological infor-  
mation : No data available

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**Section 13: Disposal considerations****Disposal methods**

Waste from residues	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

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**Section 14: Transport information**
**International Regulations**
**UNRTDG**

UN number	:	UN 1133
UN proper shipping name	:	ADHESIVES ( )
Transport hazard class(es)	:	3
Packing group	:	III
Labels	:	3
Environmental hazards	:	no

**IATA-DGR**

UN/ID No.	:	UN 1133
UN proper shipping name	:	Adhesives ( )
Transport hazard class(es)	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355
Remarks	:	Dangerous goods in excepted quantities (3)

**IMDG-Code**

UN number	:	UN 1133
UN proper shipping name	:	ADHESIVES ( )
Transport hazard class(es)	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-D
Marine pollutant	:	no
Remarks	:	Dangerous goods in excepted quantities (3)

**Transport in bulk according to IMO instruments**

Not applicable for product as supplied.

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**Section 15: Regulatory information**
**Safety, health and environmental regulations specific for the product in question**

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subject to the requirements in the Act/Regulations.

Environmental Protection and Management Act and : Not applicable

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Environmental Protection and Management (Hazardous Substances) Regulations  
 Fire Safety (Petroleum and Flammable Materials) Regulations : Methyl Ethyl Ketone  
 Ethanol

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**Section 16: Other information**

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**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
 SG OEL : Singapore. Workplace Safety and Health (General Provisions) Regulations - First Schedule Permissible Exposure Limits of Toxic Substances.

ACGIH / TWA : 8-hour, time-weighted average  
 ACGIH / STEL : Short-term exposure limit  
 SG OEL / PEL (long term) : Permissible Exposure Level (PEL) Long Term

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardization; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

# SAFETY DATA SHEET



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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SG / EN