



DuPont™ Joint Adhesive - Component A

Version 4.0

Revision Date 04.07.2013

Ref. 150000002819

This SDS adheres to the standards and regulatory requirements of Australia and may not meet the regulatory requirements in other countries.

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : DuPont™ Joint Adhesive - Component A
 Use of the : Adhesives
 Substance/Mixture :
 Company : Du Pont (Australia) Pty Ltd
 7 Eden Park Drive
 Macquarie Park NSW 2113
 Australia

Telephone : (02) 9923 6111
 Telefax : (02) 9923 6011
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 number : (24 hr Emergency Medical Information: 1800 674 415)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Adhesives
Components

Chemical Name	CAS-No.	Concentration
Methyl methacrylate	80-62-6	35 - 55%
Poly(Ethyl Acrylate/Methyl Methacrylate)	9010-88-2	20 - 40%
Aluminum hydroxide	21645-51-2	10 - 40%
Butyl methacrylate	97-88-1	1 - 10%
Propylidynetrimethyl trimethacrylate	3290-92-4	0 - 5%
Silicon dioxide, amorphous	7631-86-9	0 - 5%
Pigments		<=1%

3. HAZARDS IDENTIFICATION

Hazard classification

Classified as dangerous goods according to the ADG Code
 Classified as hazardous according to criteria of NOHSC.

Risks

Highly flammable.
 Irritating to respiratory system and skin.
 May cause sensitisation by skin contact.

Safety data

Keep container in a well-ventilated place.
 Keep away from sources of ignition - No smoking.
 Avoid contact with skin.
 Take precautionary measures against static discharges.
 Wear suitable gloves.
 This material and its container must be disposed of as hazardous waste.

Specific hazards



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Vapours may form explosive mixtures with air.

4. FIRST AID MEASURES

- General advice : Never give anything by mouth to an unconscious person.
- Inhalation : Remove from exposure, lie down. Consult a physician after significant exposure.
- Skin contact : Wash off immediately with soap and plenty of water.
- Eye contact : Remove contact lenses. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Keep eye wide open while rinsing.
- Ingestion : Clean mouth with water and drink afterwards plenty of water. Ingest activated charcoal. Do not induce vomiting without medical advice.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Foam, Dry chemical, Carbon dioxide (CO₂)
- Specific hazards during firefighting : Hazardous combustion products
Carbon monoxide Carbon dioxide (CO₂) Biphenyls
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Evacuate personnel and keep upwind of fire. Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Ensure adequate ventilation. Remove all sources of ignition.
- Environmental precautions : Prevent product from entering drains.
- Methods for cleaning up : Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Clean with detergents. Avoid solvents.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Avoid contact with skin and eyes. Use only in well-ventilated areas.
- Advice on protection against fire and explosion : Keep product and empty container away from heat and sources of ignition. When using do not smoke.


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Storage

Requirements for storage areas and containers : Keep tightly closed in a dry, cool and well-ventilated place.

Advice on common storage : No materials to be especially mentioned.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Occupational Exposure Limits

Chemical Name	Occupational Exposure Limits		Regulation
Methyl methacrylate	STEL	100 ppm	US. ACGIH Threshold Limit Values (2011)
	TWA	50 ppm	US. ACGIH Threshold Limit Values (2011)
	TWA	50 ppm, 208 mg/m ³	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment) (08 2005)
	STEL	100 ppm, 416 mg/m ³	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment) (08 2005)
Aluminum hydroxide	TWA	1 mg/m ³ (Respirable fraction.)	US. ACGIH Threshold Limit Values (2011)
Silicon dioxide, amorphous	TWA	2 mg/m ³ (Respirable fraction.)	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment) (08 2005)
Titanium dioxide	TWA	10 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	TWA	10 mg/m ³ (Inspirable dust.)	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment) (08 2005)

Engineering measures

Use sufficient ventilation to keep employee exposure below recommended limits.

Personal protective equipment


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Respiratory protection	: No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection	: polyvinylalcohol (PVA) gloves, Nitrile rubber gloves.
Eye protection	: Safety glasses
Hygiene measures	: Wash hands before breaks and at the end of workday. Keep away from food, drink and animal feedingstuffs. Wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid
Colour	: various
Odour	: acrylic-like
pH	: not applicable
Flash point	: 10 °C
Ignition temperature	: 430 °C
Explosive properties	: Not explosive
Lower explosion limit	: 2.1 vol%
Upper explosion limit	: 12.5 vol%
Vapour pressure	: 39 hPa at 20 °C
Density	: 1.2 - 1.24 g/cm ³
Water solubility	: partly miscible
Viscosity, dynamic	: no data available

10. STABILITY AND REACTIVITY

Materials to avoid	: Reducing agents, Oxidizing agents
Hazardous decomposition products	: No information available.
Hazardous reactions	: No decomposition if used as directed.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	
• Methyl methacrylate	: LD50/rat : > 5,000 mg/kg


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- Poly(Ethyl Acrylate/Methyl Methacrylate) : LD50/rat : > 5,000 mg/kg
 - Aluminum hydroxide : LD50/rat : > 5,000 mg/kg
 - Butyl methacrylate : LD50/rat : > 2,000 mg/kg
Method: OECD Test Guideline 401
 - Propylidynetrimethyl trimethacrylate : LD50/rat : 25,530 mg/kg
 - Silicon dioxide, amorphous : LD50/rat : > 10,000 mg/kg
- Acute inhalation toxicity
- Methyl methacrylate : ALC - Approximate Lethal Concentration/1 h/rat : > 74 mg/l
Irritating to respiratory system.
 - Aluminum hydroxide : LC50/4 h/rat : > 5.09 mg/l
Information given is based on data obtained from similar substances.
 - Butyl methacrylate : LC50/4 h/rat : 29 mg/l
Target Organs: Respiratory Tract
Respiratory tract irritation
 - Silicon dioxide, amorphous : An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.
- Acute dermal toxicity
- Poly(Ethyl Acrylate/Methyl Methacrylate) : LD50/rabbit : > 5,000 mg/kg
 - Butyl methacrylate : LD50/rabbit : > 2,000 mg/kg
Method: OECD Test Guideline 402
 - Propylidynetrimethyl trimethacrylate : LD50/rabbit : 17,000 mg/kg
 - Silicon dioxide, amorphous : LD50/rabbit : > 5,000 mg/kg
- Skin irritation
- Methyl methacrylate : irritant
 - Poly(Ethyl Acrylate/Methyl Methacrylate) : rabbit
Classification: Not classified as irritant Result: No skin irritation slight irritation
 - Aluminum hydroxide : rabbit
non-irritant
 - Butyl methacrylate : rabbit
Classification: Irritating to skin. Result: Severe skin irritation Method: OECD Test Guideline 404
 - Propylidynetrimethyl : rabbit


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trimethacrylate

Classification: Not classified as irritant Result: slight irritation

- Silicon dioxide, amorphous

- : rabbit
Classification: Not classified as irritant Result: No skin irritation

Eye irritation

- Methyl methacrylate

: non-irritant

- Poly(Ethyl Acrylate/Methyl Methacrylate)

- : rabbit
Classification: Not classified as irritant Result: No eye irritation slight irritation

- Aluminum hydroxide

- : rabbit
non-irritant

- Butyl methacrylate

- : rabbit
Classification: Irritating to eyes. Result: Eye irritation Method: OECD Test Guideline 405

- Propylidynetrimethyl trimethacrylate

- : rabbit
Classification: Not classified as irritant Result: slight irritation

- Silicon dioxide, amorphous

- : rabbit
Classification: Not classified as irritant Result: No eye irritation

Sensitisation

- Methyl methacrylate

- : animals (unspecified species) Classification: May cause sensitisation by skin contact. Result: Causes sensitisation.

- Poly(Ethyl Acrylate/Methyl Methacrylate)

- : human Classification: Does not cause skin sensitisation. Result: Does not cause skin sensitisation. Patch test on human volunteers did not demonstrate sensitisation properties.

- Aluminum hydroxide

- : animals (unspecified species) Classification: Not a skin sensitizer. Result: Did not cause sensitisation on laboratory animals. The toxicological data has been taken from products of similar composition.

- Butyl methacrylate

- : Maximisation Test guinea pig Classification: May cause sensitisation by skin contact. Result: Causes sensitisation. Method: OECD Test Guideline 406

- Propylidynetrimethyl trimethacrylate

- : Maximisation Test guinea pig Classification: Not a skin sensitizer. Result: Did not cause sensitisation on laboratory animals. There are rare or inconclusive reports of human skin sensitization.

- Silicon dioxide, amorphous

- : human Classification: Not a skin sensitizer. Result: Does not cause skin sensitisation. Patch test on human volunteers did not demonstrate sensitisation properties.

- Result: Does not cause respiratory sensitisation.

Repeated dose toxicity

- Methyl methacrylate

- : Inhalation, rat
Nasal irritation


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• Butyl methacrylate : Inhalation, rat
Respiratory tract irritation, Eye irritation, Reversible, altered hematology

• Propylidynetrimethyl trimethacrylate : Oral, rat
No adverse effect has been observed in chronic toxicity tests.

Dermal, rabbit
No adverse effect has been observed in chronic toxicity tests.

• Silicon dioxide, amorphous : Oral, rat
No toxicologically significant effects were found.

Inhalation, multiple species
Reversible, Respiratory Tract, Inflammation

Mutagenicity assessment

• Aluminum hydroxide : Did not cause genetic damage in cultured bacterial cells. Information given is based on data obtained from similar substances.

• Butyl methacrylate : Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

• Propylidynetrimethyl trimethacrylate : Overall weight of evidence indicates that the substance is not mutagenic. Animal testing did not show any mutagenic effects. Did not cause genetic damage in cultured bacterial cells. Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.

• Silicon dioxide, amorphous : Animal testing did not show any mutagenic effects. Did not cause genetic damage in cultured mammalian cells. Did not cause genetic damage in cultured bacterial cells.

Carcinogenicity assessment

• Butyl methacrylate : Animal testing did not show any carcinogenic effects.

• Silicon dioxide, amorphous : Overall weight of evidence indicates that the substance is not carcinogenic.

Toxicity to reproduction assessment

• Butyl methacrylate : Animal testing showed no reproductive toxicity.

• Propylidynetrimethyl trimethacrylate : Animal testing showed no reproductive toxicity.

• Silicon dioxide, amorphous : Evidence suggests the substance is not a reproductive toxin in animals.

Assessment teratogenicity

• Aluminum hydroxide : Did not show teratogenic effects in animal experiments.

• Butyl methacrylate : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity. Reduced growth Foetal malformations

• Propylidynetrimethyl trimethacrylate : Animal testing showed no developmental toxicity.

• Silicon dioxide, amorphous : Evidence suggests the substance is not a developmental toxin in animals.

Human experience : Excessive exposures may affect human health, as follows:



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Inhalation: *Central nervous system*: Nausea, Drowsiness, Dizziness, Headache
Respiratory system: Irritation

12. ECOLOGICAL INFORMATION

Toxicity to fish

- Butyl methacrylate : LC50/96 h/Oryzias latipes (medaka): 5.57 mg/l
Method: OECD Test Guideline 203
- Propylidynetrimethyl trimethacrylate : LC50/96 h/Oncorhynchus mykiss (rainbow trout): 1 - 10 mg/l
- Silicon dioxide, amorphous : Aquatic toxicity is unlikely due to low solubility.

Toxicity to algae

- Butyl methacrylate : ErC50/96 h/Pseudokirchneriella subcapitata (green algae): 130 mg/l
Method: OECD Test Guideline 201

EbC50/96 h/Pseudokirchneriella subcapitata (green algae): 57 mg/l
Method: OECD Test Guideline 201

- Propylidynetrimethyl trimethacrylate : ErC50/72 h/Pseudokirchneriella subcapitata (green algae): 1 - 10 mg/l

Aquatic toxicity

- Butyl methacrylate : EC50/48 h/Daphnia magna (Water flea): 32 mg/l
Method: OECD Test Guideline 202

13. DISPOSAL CONSIDERATIONS

Product : Do not dispose of waste into sewer. Dispose of as special waste in compliance with local and national regulations.

Contaminated packaging : Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

ADG

UN number : 1133
 Proper shipping name : ADHESIVES
 Class : 3
 Packing group : II
 Hazchem Code : .3YE


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IMDG

UN number : 1133
 Proper shipping name : ADHESIVES
 Class : 3
 Packing group : II
 Labelling No. : 3
 Marine pollutant : no

IATA_C

UN number : 1133
 Proper shipping name : ADHESIVES
 Class : 3
 Packing group : II
 Labelling No. : 3

Further information : Classified as dangerous goods according to the ADG Code

15. REGULATORY INFORMATION**Labelling**

Symbol(s) : F Highly flammable
 Xi Irritant

Hazardous components : Methyl methacrylate
 Butyl methacrylate

R-phrase(s) : R11 Highly flammable.
 R37/38 Irritating to respiratory system and skin.
 R43 May cause sensitisation by skin contact.

S-phrase(s) : S 9 Keep container in a well-ventilated place.
 S16 Keep away from sources of ignition - No smoking.
 S24 Avoid contact with skin.
 S33 Take precautionary measures against static discharges.
 S37 Wear suitable gloves.
 S60 This material and its container must be disposed of as hazardous waste.

Further information : Classified as hazardous according to criteria of NOHSC.

National regulatory information

SUSMP : Schedule 6

16. OTHER INFORMATION**Sources of key data used to compile the Safety Data Sheet:**

1. National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)]
2. Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)]
3. List of Designated Hazardous Substances [NOHSC:10005(1999)]
4. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]

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5. Australian Code for the Transport of Dangerous Goods by Road & Rail No. 7 [National Transport Commission]
6. Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
7. National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]

Department:

Du Pont (Australia) Pty Ltd
7 Eden Park Drive
Macquarie Park NSW 2113
Australia

Further information:

Before use read DuPont's safety information.

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Significant change from previous version is denoted with a double bar.

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