



DuPont™ Joint Adhesive - Component A

Version 4.0

Revision Date 2013/06/20

Ref. 15000002819

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

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

Product name : DuPont™ Joint Adhesive - Component A

Recommended use of the chemical and restrictions on use

Recommended use : Adhesives

Supplier : DuPont (New Zealand) Limited
Street address : Central Park Corporate Centre, Level 2, Building 5, 666 Great South Road,
 Greenlane, Auckland 1051
 New Zealand
Telephone : (64)-9526-2501
Telefax : (64)-9526-2505

Emergency telephone number : NZ Poisons Information Centre Ph: 0800 764766
 24-hour Emergency Number: (64)-9526-2501
Issuing date : 2013/06/24

2. HAZARDS IDENTIFICATION

Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001
 Classified as a Dangerous Good according to NZS 5433

HSNO Classification:

3.1B : Flammable Liquids
 6.1D : Acute toxicity (Inhalation)
 6.3A : Skin irritation
 6.5B : Skin sensitisation
 6.8B : Toxic to Reproduction
 6.9B : Specific Target Organ Toxicity
 9.1C : Aquatic toxicity (Acute or Chronic)

Pictogram :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapour.
 Causes skin irritation.
 May cause an allergic skin reaction.
 Harmful if inhaled.


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Suspected of damaging fertility or the unborn child.

- Precautionary statements** :
- Obtain special instructions before use.
 - Do not handle until all safety precautions have been read and understood.
 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 - Keep container tightly closed.
 - Ground/bond container and receiving equipment.
 - Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 - Use only non-sparking tools.
 - Take precautionary measures against static discharge.
 - Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 - Wash skin thoroughly after handling.
 - Use only outdoors or in a well-ventilated area.
 - Contaminated work clothing should not be allowed out of the workplace.
 - Avoid release to the environment.
 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.
 - Rinse skin with water/ shower.
 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - IF exposed or concerned: Get medical advice/ attention.
 - Specific treatment (see supplemental first aid instructions on this label).
 - If skin irritation or rash occurs: Get medical advice/ attention.
 - Take off contaminated clothing and wash before reuse.
 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 - Store in a well-ventilated place. Keep cool.
 - Store locked up.
 - Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Vapours may form explosive mixtures with air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

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 %

4. FIRST AID MEASURES

Never give anything by mouth to an unconscious person.

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.



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- Skin contact : Wash off immediately with soap and plenty of water.
- Inhalation : Remove from exposure, lie down. Consult a physician after significant exposure.
- Ingestion : Clean mouth with water and drink afterwards plenty of water. Ingest activated charcoal. Do not induce vomiting without medical advice.
- Most important symptoms : No information available.
- Notes to physician : No information available.

5. FIREFIGHTING MEASURES

- Specific hazards : Hazardous combustion products
Carbon monoxide Carbon dioxide (CO2) Biphenyls
Evacuate personnel and keep upwind of fire. Do not allow run-off from fire fighting to enter drains or water courses.
- Suitable extinguishing media : Foam, Dry chemical, Carbon dioxide (CO2)
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Hazchem Code : .3YE

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Remove all sources of ignition.
- Environmental precautions : Prevent product from entering drains.
- Methods and materials for containment and 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

- Technical measures/Precautions : 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.
- Precautions for safe handling : Keep product and empty container away from heat and sources of ignition. When using do not smoke.


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Storage

Suitable storage conditions : Keep tightly closed in a dry, cool and well-ventilated place.

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	New Zealand. WES. (Workplace Exposure Standards) (09 2010)
	STEL	100 ppm, 416 mg/m ³	New Zealand. WES. (Workplace Exposure Standards) (09 2010)
Aluminum hydroxide	TWA	1 mg/m ³ (Respirable fraction.)	US. ACGIH Threshold Limit Values (2011)
Titanium dioxide	TWA	10 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	TWA	10 mg/m ³	New Zealand. WES. (Workplace Exposure Standards) (07 2011)

Engineering measures : Use sufficient ventilation to keep employee exposure below recommended limits.

Personal protective equipment

Hand protection : polyvinylalcohol (PVA) gloves, Nitrile rubber gloves.

Eye protection : Safety glasses

Skin and body protection : No information available.

Respiratory protection : No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment.

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**Appearance**

Physical state : liquid

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Form	: liquid
Colour	: various
Odour	: acrylic-like
Odour Threshold	: no data available
pH	: not applicable
Melting point/freezing point	
	no data available
Boiling point/boiling range	
	no data available
Flash point	: 10 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Explosive properties	
Upper explosion limit	: 12.5 vol%
Lower explosion limit	: 2.1 vol%
Vapour pressure	: 39 hPa (20 °C)
Vapour density	: no data available
Relative density	: no data available
Solubility(ies)	
Water solubility	: partly miscible
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: Ignition temperature: 430 °C
Decomposition temperature	: no data available
Viscosity	:
Other data	: Density: 1.2 - 1.24 g/cm ³



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10. STABILITY AND REACTIVITY

Stability : No decomposition if used as directed.

Conditions to avoid : No information available.

Materials to avoid : Reducing agents, Oxidizing agents

Hazardous decomposition products : No information available.

Possibility of hazardous reactions : No information available.

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11. TOXICOLOGICAL INFORMATION

- Acute toxicity : Methyl methacrylate:
- Oral: LD50/rat : > 5,000 mg/kg
- Inhalation: ALC - Approximate Lethal Concentration/1 h/rat : > 74 mg/l
Irritating to respiratory system.
- Poly(Ethyl Acrylate/Methyl Methacrylate):
- Oral: LD50/rat : > 5,000 mg/kg
- Dermal: LD50/rabbit : > 5,000 mg/kg
- Aluminum hydroxide:
- Oral: LD50/rat : > 5,000 mg/kg
- Inhalation: LC50/4 h/rat : > 5.09 mg/l
Information given is based on data obtained from similar substances.
- Butyl methacrylate:
- Oral: LD50/rat : > 2,000 mg/kg
Method: OECD Test Guideline 401
- Inhalation: LC50/4 h/rat : 29 mg/l
Respiratory tract irritation
Target Organs: Respiratory Tract
- Dermal: LD50/rabbit : > 2,000 mg/kg
Method: OECD Test Guideline 402
- Propylidynetrimethyl trimethacrylate:
- Oral: LD50/rat : 25,530 mg/kg
- Dermal: LD50/rabbit : 17,000 mg/kg
- Silicon dioxide, amorphous:
- Oral: LD50/rat : > 10,000 mg/kg
- Dermal: LD50/rabbit : > 5,000 mg/kg
- Skin corrosion/irritation : Methyl methacrylate:
- irritant
- Poly(Ethyl Acrylate/Methyl Methacrylate):

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Species: rabbit
Classification: Not classified as irritant
Result: No skin irritation
slight irritation

Aluminum hydroxide:

Species: rabbit
non-irritant

Butyl methacrylate:

Species: rabbit
Classification: Irritating to skin.
Result: Severe skin irritation
Method: OECD Test Guideline 404

Propylidynetrimethyl trimethacrylate:

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

Silicon dioxide, amorphous:

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

Serious eye damage/eye
irritation

: Methyl methacrylate:

non-irritant

Poly(Ethyl Acrylate/Methyl Methacrylate):

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

Aluminum hydroxide:

Species: rabbit
non-irritant

Butyl methacrylate:

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

Propylidynetrimethyl trimethacrylate:

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

Silicon dioxide, amorphous:

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

Respiratory sensitisation /
Skin sensitisation : Methyl methacrylate:

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

Poly(Ethyl Acrylate/Methyl Methacrylate):

Species: 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:

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

Propylidynetrimethyl trimethacrylate:

Maximisation Test
Species: 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:

Species: 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.

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- Mutagenicity** : 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** : Butyl methacrylate:
- Animal testing did not show any carcinogenic effects.
- Silicon dioxide, amorphous:
- Overall weight of evidence indicates that the substance is not carcinogenic.
- Reproductive toxicity** : Aluminum hydroxide:
- Did not show teratogenic effects in animal experiments.
- Butyl methacrylate:
- Animal testing showed no reproductive toxicity.
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 reproductive toxicity.
Animal testing showed no developmental toxicity.
- Silicon dioxide, amorphous:
- Evidence suggests the substance is not a reproductive toxin in animals.
Evidence suggests the substance is not a developmental toxin in animals.


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- Target Organs : Refer to acute toxicity and/or repeated dose toxicity data for more information on target organs if applicable.
- Aspiration toxicity : no data available
- Other : Methyl methacrylate:
 Repeated dose toxicity: Inhalation, rat
 Nasal irritation
- Butyl methacrylate:
 Repeated dose toxicity: Inhalation, rat
 Respiratory tract irritation, Eye irritation, Reversible, altered hematology
- Propylidynetrimethyl trimethacrylate:
 Repeated dose toxicity: Oral, rat
 No adverse effect has been observed in chronic toxicity tests.
 Repeated dose toxicity: Dermal, rabbit
 No adverse effect has been observed in chronic toxicity tests.
- Silicon dioxide, amorphous:
 Repeated dose toxicity: Oral, rat
 No toxicologically significant effects were found.
 Repeated dose toxicity: Inhalation, multiple species
 Reversible, Respiratory Tract, Inflammation

12. ECOLOGICAL INFORMATION
Ecotoxicity effects

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.

Other

- : 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
 EC50/48 h/Daphnia magna (Water flea): 32 mg/l
 NOEC/21 d/Daphnia magna (Water flea): 2.6 mg/l
 Method: OECD Test Guideline 211
 Propylidynetrimethyl trimethacrylate:

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

Persistence and
degradability

: Butyl methacrylate:

Exposure time: 28 d
Biodegradation: 88 %
Readily biodegradable.

Propylidynetrimehyl trimethacrylate:

Exposure time: 28 d
Biodegradation: 50 - 59 %
Not readily biodegradable.

Bioaccumulation

: Butyl methacrylate:

Bioconcentration factor (BCF): 31
Bioaccumulation is unlikely.

Mobility in soil

: no data available

Other adverse effects

: no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods : 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.



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14. TRANSPORT INFORMATION

NZS 5433

UN number : 1133
 Proper shipping name : ADHESIVES
 Class : 3
 Packing group : II

IMDG

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

IATA_C

UN number : 1133
 Proper shipping name : ADHESIVES
 Class : 3
 Packing group : II

Matters needing attention for transportation : Classified as a Dangerous Good according to NZS 5433

15. REGULATORY INFORMATION

HSNO Standard Number : HSR002662

Approved Handler : This product must be under the control of an approved handler during use.

HSNO Controls : F1, F2, F3, F4, F5, F6, F11, F12, F14, F16
 T1, T2, T4, T5, T7, T8
 E1, E2, E6
 I1, I3, I5, I8, I9, I11, I13, I16, I17, I18, I19, I20, I21, I23, I25, I28, I29, I30
 P1, P3, P5, PG2, PS4
 D2, D4, D5, D6, D7, D8
 EM1, EM6, EM7, EM8, EM9, EM10, EM11, EM12, EM13
 AH1
 GN35A

16. OTHER INFORMATION

Sources of key data used to compile the Safety Data Sheet : not applicable

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Before use read DuPont's safety information. ® Registered trademark of E.I. du Pont de Nemours and Company

Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further

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information, please contact your DuPont representative. You may also request a copy of the DuPont POLICY Regarding Medical Applications H-50103-3 and DuPont CAUTION Regarding Medical Applications H-50102-3. Significant change from previous version is denoted with a double bar.

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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.