

Bondtek Adhesive - Component A

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 01/03/2018

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Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Bondtek Adhesive - Component A
Product code : 30220 & 3050

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Prosthetic device manufacturing

1.3. Details of the supplier of the safety data sheet

Supplier

Fabtech Systems LLC
PO Box 2248
Everett, WA 98213 - USA
T 1-800-322-8324
info@fabtechsystems.com

Distributor

Fabtech Systems LLC
PO Box 2248
Everett, WA 98213 - USA
T 1-800-322-8324
info@fabtechsystems.com

1.4. Emergency telephone number

Emergency number : INFOTRAC 24hr 800-535-5053
International 1-352-323-3500

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

GHS classification

Acute Tox. 2 (Inhalation:dust,mist)
Skin Irrit. 2
Resp. Sens. 1
Skin Sens. 1
Carc. 2
STOT SE 3

2.2. Label elements

GHS labelling

Hazard pictograms (GHS) :



GHS06



GHS07



GHS08

Signal word (GHS) :

Danger

Hazard statements (GHS) :

Causes skin irritation. May cause an allergic skin reaction. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer.

Precautionary statements (GHS) :

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands, forearms and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If experiencing respiratory symptoms: Call a poison center/doctor. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity

Not applicable

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
4,4'-Methylenediphenyl diisocyanate	(CAS-No.) 101-68-8	95 - < 100
Benzene, 1,1'-methylenebis[isocyanato-	(CAS-No.) 26447-40-5	< 1

Comments : The concentrations listed represent actual ranges that result from batch variability.

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER/doctor. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Apply cortisone spray at early stage.
- First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation : Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.
- Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Extinguishing powder. Carbon dioxide. In case of major fire and large quantities: Foam.
- Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon, Nitrogen oxides, Hydrogen cyanide.
- Reactivity : Hazardous polymerisation: Monomeric MDI can polymerise violently upon heating.

5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid contact with skin and eyes. Do not breathe dust.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

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6.3. Methods and material for containment and cleaning up

- For containment : Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Do not swallow. Minimize generation of dust. Use only outdoors or in a well-ventilated area. Handle and open container with care. When using do not eat, drink or smoke.
- Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ensure adequate ventilation, especially in confined areas.
- Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store locked up. Keep only in original container. Store in dry, cool, well-ventilated area. Keep away from heat and direct sunlight. Protect from moisture.
- Information on mixed storage : Do not store with: Explosives. Oxidizers. Radioactive materials. Infectious substances.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

4,4'-Methylenediphenyl diisocyanate (101-68-8)		
ACGIH	ACGIH TWA (ppm)	0.005 ppm
OSHA	OSHA PEL (Ceiling) (mg/m ³)	0.2 mg/m ³
OSHA	OSHA PEL (Ceiling) (ppm)	0.02 ppm
IDLH	US IDLH (mg/m ³)	75 mg/m ³
NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	0.005 ppm
NIOSH	NIOSH REL (ceiling) (mg/m ³)	0.2 mg/m ³
NIOSH	NIOSH REL (ceiling) (ppm)	0.02 ppm
Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)		
OSHA	OSHA PEL (Ceiling) (mg/m ³)	0.2 mg/m ³
OSHA	OSHA PEL (Ceiling) (ppm)	0.02 ppm

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Hand protection : Wear suitable gloves resistant to chemical penetration.
- Eye protection : Safety glasses or goggles are recommended when using product.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls : Avoid release to the environment.
- Other information : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : No data available
- Colour : Colourless / Yellow
- Odour : Stinging

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Odour threshold	: No data available
pH	: No data available
Melting point	: 40 °C (104 °F)
Freezing point	: No data available
Boiling point	: > 300 °C (>572 °F)
Flash point	: > 200 °C (>392 °F)
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: $\approx 1.3 \text{ g/cm}^3$
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: Lower explosive limit (LEL): 0.4 vol %
Explosive properties	: None.
Oxidising properties	: None.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Hazardous polymerisation: Monomeric MDI can polymerise violently upon heating.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reacts on contact with water releasing carbon dioxide (CO₂).

10.4. Conditions to avoid

Heat. Moisture. Direct sunlight. Incompatible materials. Avoid dust formation.

10.5. Incompatible materials

Water. Oxidizing agent. Reducing agents. Alkalis. Acids. Alcohols. Amines. Metals.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Nitrogen oxides. Hydrogen cyanide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Inhalation:dust,mist: Fatal if inhaled.

ATE (dust,mist)	0.05 mg/l/4h
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4,4'-Methylenediphenyl diisocyanate (101-68-8)

LD50 oral rat	31600 mg/kg
LC50 inhalation rat	369 mg/m ³ (Exposure time: 4 h)

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)

LD50 oral rat	> 10000 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 inhalation rat	490 mg/m ³ (Exposure time: 4 h)

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Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified.
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Suspected of causing cancer.

4,4'-Methylenediphenyl diisocyanate (101-68-8)

IARC group	3 - Not classifiable
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Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)

IARC group	3 - Not classifiable
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Reproductive toxicity	: Not classified.
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.
Symptoms/effects after inhalation	: Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Potential adverse human health effects and symptoms	: Fatal if inhaled.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
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Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)

NOEC (acute)	>= 1000 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])
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12.2. Persistence and degradability

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Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Bioaccumulation unlikely.
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Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)

BCF fish 1	3 - 14
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Partition coefficient n-octanol/water	4.5
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information	: No other effects known.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Hazardous waste due to toxicity.

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SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

Not regulated

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. International regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Revision date	: 01/03/2018
Other information	: None.
Prepared by	: Nexreg Compliance Inc. www.Nexreg.com



SDS HazCom 2012 - WHMIS 2015 (NexReg)

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