

# SDS SAFETY DATA SHEET



SDS Number:  
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BD4005  
Structural Acrylic Bonding Adhesive - Cartridges

Revision No.: 4  
Date: 08/12/2018

## Section 1 IDENTIFICATION

Product Name: BD4005 Structural Acrylic Bonding Adhesive - Cartridges

Manufacturer: Big Dog Adhesives, LLC  
435 Harrison Street  
Elkhart, INDIANA, USA 46516-2717  
Phone: 1-833-244-3644 (1-833-BIG-DOGG) Fax: 1-833-244-3649 (1-833-BIG-DOGZ)  
Email: [sales@bigdogadhesives.com](mailto:sales@bigdogadhesives.com) Website: [www.bigdogadhesives.com](http://www.bigdogadhesives.com)



Trade Name: **BIG DOG ADHESIVES** BD4005 Structural Acrylic Bonding Adhesives

Materials Uses: High strength acrylic adhesive for bonding fiberglass, steel, aluminum, and various substrates together. 10:1 product has high flexural strength and tensile strengths.

**In Case of Emergency Contact CHEMTREC: 800-424-9300 (USA)  
703-527-3887 (INTERNATIONAL)**

## Section 2 HAZARD IDENTIFICATION

### GHS Classification:

| CATEGORY   | SIGNAL WORD   | HAZARD STATEMENT(S)  |
|--|---|--|
| Physical<br>Flammable Liquids, Category 2<br>Organic Peroxides, Type F   | DANGER<br>WARNING                                   | H225 – Highly flammable liquid and vapor<br>H242 – Heating may cause a fire  |
| Health<br>Acute Oral Toxicity, Category 4<br>Skin Corrosion, Category 1<br>Serious Eye Damage, Category 1<br>Skin Sensitization, Category 1<br>STOT SE, Category 3 | WARNING<br>WARNING<br>WARNING<br>WARNING<br>WARNING | H302 – Harmful if swallowed<br>H314 – Causes severe skin burns and eye damage<br>H318 – Causes serious eye damage<br>H317 – May cause an allergic skin reaction<br>H335 – May cause a respiratory irritation |
| Environmental<br>Acute, Category 3<br>Chronic, Category 4  |   | H402 – Harmful to aquatic life<br>H413 – May cause long lasting harmful effects to aquatic life  |



### GHS Precaution Statements:

#### Prevention:

- P210 – Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P261 – Avoid breathing dust/fume/mist/vapors/spray.
- P264 – Wash hands (or other affected skin surfaces) thoroughly after handling.
- P270 – Do not eat, drink, or smoke when using this product.

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P273 – Avoid release to the environment  
P280 – Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P370/P378 – In case of fire: Use dry chemical or CO<sub>2</sub> to extinguish  
P305/P351/P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P301/P312 – IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.  
P302/P352 – IF ON SKIN: Wash with plenty of soap and water.  
P333/P313 – If skin irritation or rash occurs get medical advice/attention.

**Storage:**

P403 – Store in a well-ventilated place.  
P410 – Protect from sunlight.  
P411 – Store at temperatures not exceeding 25°C (75°F).

**Disposal:**

P501 – Dispose of contents/containers in accordance with local/regional/national/international regulations.

**Route of Entry:** Eye contact, skin contact, inhalation, and ingestion.

**Target Organs:** Skin, eyes, respiratory tract, digestive tract, liver, kidney, olfactory and Central Nervous System (CNS).

**Skin Contact:** May cause irritation of the skin. Prolonged exposure may cause sensitization. Preexisting skin conditions may be aggravated by exposure to this material.

**Eye Contact:** May cause irritation and/or sensitization.

**Respiratory Contact:** Respiratory tract irritant. Prolonged exposure may result in dizziness, nausea, headache, and anesthetic effects. May cause sensitization. Preexisting respiratory conditions may be aggravated by exposure to this product. May cause CNS depression.

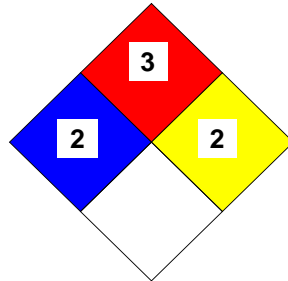
**Ingestion:** Not an expected route of entry. If ingested it may cause irritation to the gastrointestinal tract.

**ADHESIVE:**

**HMIS (United States)**

Health 2  
Flammability 3  
Reactivity 2  
PPE B

**NFPA (United States)**



**WHMIS (Canada):** B2, D2B

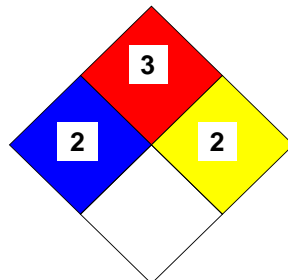


**ACTIVATOR:**

**HMIS (United States)**

Health 2  
Flammability 3  
Reactivity 2  
PPE B

**NFPA (United States)**



**WHMIS (Canada):** C, D2B



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## Section 3 COMPOSITION / INFORMATION ON INGREDIENTS

|            | Name                        | CAS #   | % by Weight |
|------------|-----------------------------|---------|-------------|
| Adhesive:  | Methyl Methacrylate Monomer | 80-62-6 | 30-50       |
|            | Methacrylic Acid            | 79-41-4 | 1 – 10      |
| Activator: | Benzoyl Peroxide            | 94-36-0 | 5 – 30      |

## Section 4 FIRST-AID MEASURES

**Skin:** Remove contaminated clothing. Flush skin with water, then wash affected areas with soap and water. If irritation develops, seek medical attention. Wash or dispose of clothing before reuse.

**Eye:** Flush eyes with water for 15 minutes. Remove contact lenses prior to water flush if possible. Seek immediate medical attention.

**Respiratory:** Remove patient to fresh air. If patient is having difficulty breathing, seek immediate medical attention. If not breathing, clear airway and start mouth-to-mouth artificial respiration (or use bag-mask respirator). Seek immediate medical attention.

**Ingestion:** Give patient water to dilute material in stomach. DO NOT induce vomiting. Seek immediate medical attention. If vomiting occurs naturally, have person lean forward to reduce risk of aspiration. DO NOT give anything by mouth to an unconscious person.

## Section 5 FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** In case of fire, use dry chemical or CO<sub>2</sub>. Water spray may cause frothing.

**Specific Hazards Arising from the Chemical:** Sealed containers of adhesive may rupture violently at elevated temperatures due to polymerization. Organic peroxides can decompose violently if heated while confined.

**Special Protective Equipment and Precautions for Firefighters:** Use self-contained breathing apparatus (SCBA) and protective clothing.

**Flash Point and Method:** 50°F (10°C). Fine mists may be explosive below the flash point. Tag Closed Cup.

**Flammability Classification:** Class 1B.

**Risk of Explosion due to Mechanical Impact:** Not Applicable.

**Risk of Explosion due to Static Discharge:** Not Applicable.

**Hazardous Products of Combustion:** Carbon Oxides (CO and CO<sub>2</sub>), Methyl Methacrylate, and various Hydrocarbons.

**Autoignition Temp.:** 790°F (421°C).

**LEL:** 1.7%.

**UEL:** 12.5%.

## Section 6 ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, and Emergency Procedures:** For large spill or leak wear self-contained breathing apparatus (SCBA) and appropriate PPE.

**Environmental Precautions:** Keep out of sewers and drains.

**Clean-Up Methods and Materials:** Absorb with an inert material and place in an appropriate container for disposal.

## Section 7 HANDLING AND STORAGE

**Handling Precautions:** Avoid breathing vapors. Use in a well-ventilated area. Wear rubber gloves (nitrile or butyl) and chemical resistant apron. Wear chemical splash goggles. Do not reuse empty containers.

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**Storage Precautions:** Store in a cool, dry, well-ventilated area at temperatures less than 75°F (25°C). Storage above 212°F (100°C) may cause explosive decomposition. Avoid storage in direct sunlight. Keep containers closed when not in use. Keep away from heat sources, sparks, and open flames.

## Section 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control Parameters and Exposures:

| Material Name:                     | Exposure Limits:  |
|------------------------------------|---|
| Benzoyl Peroxide (CAS 94-36-0):    | OSHA PEL: TWA 5 mg/m <sup>3</sup><br>ACGIH TLV: TWA 5 mg/m <sup>3</sup> |
| Methacrylic Acid (CAS 79-41-4):    | ACGIH TLV: TWA 20 ppm   |
| Methyl Methacrylate (CAS 80-62-6): | OSHA PEL: TWA 100 ppm<br>ACGIH TLV: TWA 50 ppm<br>STEL 100 ppm          |

**Engineering Controls:** Provide adequate explosion proof ventilation (general or local exhaust). Ensure that a working eyewash and safety shower are in the work area.

### Individual Protection Measures and PPE:

**Eye / Face Protection:** Wear safety glasses with side shields or splash goggles.

**Skin Protection:** Chemical resistant gloves (nitrile or butyl) and chemical resistant apron are recommended.

**Respiratory Protection** In case of insufficient ventilation, wear an approved (NIOSH) respirator with organic vapor cartridge and dust/mist pre-filter.

**Thermal Hazards:** None.

## Section 9 PHYSICAL AND CHEMICAL PROPERTIES

|  | Adhesive                   | Activator                 |
|--|----------------------------|---------------------------|
| <b>Appearance:</b>                                 | Colored (various) Paste    | Colored (various) paste   |
| <b>Odor:</b>                                       | Mild Sweet                 | Mild Sweet                |
| <b>Odor Threshold:</b>                             | Not Available              | Not Available             |
| <b>pH:</b>   | 4.0 – 6.0                  | 4.0 – 6.0                 |
| <b>Melting Point / Freezing Point:</b>             | -54°F (-48°C)              | Not Available             |
| <b>Initial Boiling Point:</b>                      | 212°F (100°C)              | > 550°F (288°C)           |
| <b>Flash Point and Method:</b>                     | 50°F (10°C) Tag Closed Cup | Not Available             |
| <b>Evaporation Rate:</b>                           | 3                          | <1 (butyl acetate = 1)    |
| <b>Flammability:</b>                               | Class 1B                   | Class 1B.                 |
| <b>Lower Explosion Limit:</b>                      | 1.7%                       | Not Available             |
| <b>Upper Explosion Limit:</b>                      | 12.5%                      | Not Available             |
| <b>Vapor Pressure:</b>                             | 28 mm Hg @ 68°F (20°C)     | < 0.5 mm Hg @ 68°F (20°C) |
| <b>Vapor Density:</b>                              | 3.5                        | Not Available             |
| <b>Relative Density:</b>                           | 7.7 – 8.8 lbs./gallon      | Not Available             |
| <b>Solubility(ies):</b>                            | Not Available              | Not Available             |
| <b>Partition Coefficient (n-Octanol in Water):</b> | Not Applicable             | Not Applicable            |
| <b>Auto-Ignition Temperature:</b>                  | 790°F (421°C)              | Not Available             |
| <b>Decomposition Temperature:</b>                  | Not Available              | Not Available             |
| <b>Viscosity (Dynamic CPS/mPa-s):</b>              | 60k – 250k                 | 40k to 120k               |
| <b>Percent Volatile:</b>                           | Not Available              | Not Available             |
| <b>Specific Gravity:</b>                           | 0.93 – 1.05                | 1.0 to 1.15               |
| <b>VOC:</b>  | < 50 g/L of mixed product  | Not Available             |

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## Section 10 STABILITY AND REACTIVITY

**Reactivity:** Product is stable as supplied and when used as intended. Product can become unstable under certain conditions or in contact with incompatible materials.

**Chemical Stability:** Not Available.

**Possibility of Hazardous Reactions:** Polymerization may occur under certain conditions.

**Conditions to Avoid:** Avoid extreme temperatures, open flames, sparks, and direct sunlight.

**Materials to Avoid (Incompatibility):** Oxidizing agents and conditions, strong acids and alkalies, oxygen-free atmospheres, inert gas blanketing, and free radical initiators.

**Hazardous Decomposition Products:** Carbon Oxides (CO, CO<sub>2</sub>), Methyl Methacrylate, and various Hydrocarbons.

## Section 11 TOXICOLOGICAL INFORMATION

### Acute Toxicity to Animals:

|  |   |
|--|---|
| Adhesive: Methyl Methacrylate (CAS 80-62-6): | LC50 = 7093 ppm (4 hour inhalation, rat)<br>LD50 = 7940 mg/kg (oral, rat)<br>LD50 > 7550 mg/kg (dermal, rabbit)   |
| Methacrylic Acid (CAS 79-41-4):              | LC50 = 7100 mg/m <sup>3</sup> (4 hour inhalation, rat)<br>LD50 > 7550 mg/kg (oral, rat)<br>LD50 = 1600 mg/kg (oral, mouse)<br>LD50 > 500 mg/kg (dermal, rabbit) |
| Activator: Benzoyl Peroxide (CAS 94-36-0):   | LC50 = 2 mg/L (96 hour inhalation, guppy)<br>LD50 = 6400 mg/kg (oral, rat)<br>LD50 > 2000 mg/kg (oral, mouse)   |

**Acute Toxicity to Humans:** This product has not been tested for human effects. No additional information.

**Chronic Toxicity to Animals:** This product has not been tested for animal effects. No additional information.

**Chronic Toxicity to Humans:** This product has not been tested for human effects. No additional information.

**Skin Corrosion / Irritation:** Not Available.

**Eye Damage / Irritation:** Not Available.

**Respiratory Sensitization:** Not Available.

**Skin Sensitization:** Not Available.

**Mutagenicity:** Classifiable as "none" for human.

**Carcinogenicity:** Not classifiable for human or animal.

**Reproductive Toxicity:** Not Available.

**Teratogenic Effects:** Classifiable as "none" for human.

**STOST- Single Exposure:** Not Available.

**STOST – Repeated Exposure:** Not Available.

**Aspiration Hazard:** Not Available.

## Section 12 ECOLOGICAL INFORMATION

**Ecotoxicity:** This product contains components that may be harmful to aquatic organisms and may cause long term adverse effects in an aquatic environment.

**Persistence and Degradability:** Not Available.

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**Bioaccumulative Potential:** This product contains components with the potential to bio-accumulate.

**Mobility in Soil:** Not Available.

**Other Adverse Effects:** Not Available.

## Section 13 DISPOSAL CONSIDERATIONS

### Disposal Methods:

**Adhesive:** Adhesive is considered Hazardous Waste Product per RCRA 40 CFR 261 and is classed as D001. Spilled, contaminated, or waste material should be put into a suitable container and handled according to Federal, State, and local regulations. Contact a qualified waste management company for assistance.

**Activator:** Not a hazardous waste product (RCRA 50 CFR 261). May be disposed of by landfill or incineration. Dispose of in accordance with Federal, State, and local regulations.

**DANGER!** Rags, steel wool, and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. Waste should be immediately placed in a sealed water filled container.

## Section 14 TRANSPORT INFORMATION

**UN Number:** UN1133.

**UN Proper Shipping Name:** Adhesives (DOT), Flammable Liquid.

**Transport Hazard Class:** 3.

**Packing Group:** II

**DOT Classification:** UN1133, Adhesives, Flammable Liquid, Hazard Class 3, Packing Group II, Limited Quantity.

**Special Provision for Transport:** 1 Liter (0.3 gallon) or less may use Limited Quantity exceptions (49 CFR 172.102 & 49 CFR 173.150 (a) (2)).

**ADR / RID Classification:** Class 3 Flammable Liquid.

**ICAO/IATA Classification:** Class 3 Flammable Liquid.

**IMO/IMDG Classification:** Class 3 Flammable Liquid.

**Marine Pollutant:** No additional information.

## Section 15 REGULATORY INFORMATION

### U.S. Federal Regulations

| Chemical (& CAS Number)           | SARA 302 (EHS)TPQ | SARA 304 (EHS)Rq | SARA 313 de minimis | CERCLA Rq | CAA 112(r) TQ | RCRA Code |
|-----------------------------------|-------------------|------------------|---------------------|-----------|---------------|-----------|
| Benzoyl Peroxide (CAS 94-36-0)    |                   |                  | 1.0                 |           |               |           |
| Methyl Methacrylate (CAS 80-62-6) |                   |                  | 1.0                 | 1000      |               | U162      |
| Methacrylic Acid (CAS 79-41-4)    |                   |                  |                     |           |               |           |

All quantities in pounds.

### State Regulations

| Chemical (& CAS Number)           | CA Prop 65 | MA RTK | MN RTK | NJ RTK | PA RTK | RI RTK |
|-----------------------------------|------------|--------|--------|--------|--------|--------|
| Benzoyl Peroxide (CAS 94-36-0)    |            | X      |        | X      | X      | X      |
| Methyl Methacrylate (CAS 80-62-6) |            | X      | X      | X      | X      | X      |
| Methacrylic Acid (CAS 79-41-4)    |            | X      |        |        | X      |        |

**TSCA (Toxic Substances Control Act):** All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory Requirements.

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## International Regulations:

**DSL (Canada Domestic Substance List):** All components of this product are on the DSL (Canada Domestic Substance List) or are exempt from DSL.

**EINECS:** Not Available.

**WHMIS:** B2, C, D2B.

|                                     |
|-------------------------------------|
| <b>Section 16 OTHER INFORMATION</b> |
|-------------------------------------|

**Changes to This Revision: August 12, 2018**

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### Notice to Reader

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named manufacturer nor any of its subsidiaries assumes any liability whatsoever for accuracy or completeness of the information contained herein.*

*Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*

|                            |
|----------------------------|
| <b>END OF SDS DOCUMENT</b> |
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