

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE AND PREPARATION

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
P.O. Box 53
Stillwater, MN 55082 USA
Phone: 1-651-430-2270
Fax: 1-651-430-3634

Polywater Europe BV
Mauritsplaat 126
NL-3012CD Rotterdam
Netherlands
Tel: +31 10 233 0578

Emergency Number: +1-651-430-2270

**Product Name: BonDuit®
Gel Resin – BT
Part A Reusable Cartridge Package**

Chemical Description: Sealant Resin, Part A of
two-part sealant

Product Use: Adhesive

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt %</u>
Bisphenol A Diglycidyl Ether	25068-38-6	500-033-5	75 – 90

3. HAZARDS IDENTIFICATION

Emergency Overview: Moderate skin and eye irritant. May cause allergic skin reaction. Keep out of reach of children. Industrial use only.

Eye Contact: Direct eye contact with material or vapors may cause eye irritation. Contact at elevated temperatures may cause thermal burns.

Skin Contact: This product has moderate skin irritation potential. Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material. Prolonged or repeated skin exposure may cause skin sensitization.

Irritation and Sensitization Potential: This product has moderate skin irritation potential. It is not a sensitizer.

Inhalation (Breathing): Low vapor pressure makes this route of exposure unlikely.

Ingestion (Swallowing): Material has a low level of oral toxicity. Ingestion may cause irritation of the gastrointestinal tract.

4. FIRST AID MEASURES

Eye Contact: Flush eyes with clean water. If irritation persists, seek medical attention. For direct eye contact, flush with large quantity of water for 15 minutes. Seek medical attention.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with water. If irritation occurs, seek medical attention.

Inhalation (Breathing): If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention.

Ingestion (Swallowing): Drink one or two glasses of milk or water. Do not induce vomiting. If victim is unconscious, place on the left side with head down. Never give anything by mouth to an unconscious person. Do not leave victim unattended. Seek medical attention.

5. FIRE-FIGHTING MEASURES

Flash Point: >400 °F (204 °C) PMCC

Flammable Limits: Not Available

Autoignition Temperature: Not Available

Hazardous Decomposition and By-Products: CO₂, CO, aldehydes, acids and other organic substances may be formed during combustion or elevated temperature (>500°F) degradation.

Extinguishing Media: Water Fog, Carbon Dioxide, Dry Chemical or Foam.

Special Precautions: Full protective equipment including self-contained breathing apparatus should be used. Water spray may be used to cool fire exposed container to prevent pressure build-up and possible auto-ignition or rupture.

Unusual Hazards: Heating above 300°F in the presence of air may cause slow oxidative decomposition and above 500°F may cause polymerization.

6. ACCIDENTAL RELEASE MEASURES

Major spill unlikely with small package. Residual resin may be removed using steam or hot soapy water. Dispose of according to local and federal regulations. Prevent spill from entering drainage/sewer systems, waterways, and surface waters.

7. HANDLING AND STORAGE

Keep cartridge tightly closed. Reseal cartridge after use. Keep cartridge cool, dark, dry, and away from sources of ignition. Protect from freezing. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practice. All cartridges should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Provide appropriate ventilation/respiratory protection against decomposition products during welding/flame operations (i.e. torches used to install heat shrink products) on or near cured product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: None required for normal handling temperatures and conditions.

Protective Gloves: The use of impermeable gloves is recommended to prevent skin contact.

Eye Protection: Eye protection is recommended, especially if the material is used in ways where it could contact the eyes.

Other Protective Equipment: Use protective cream if skin contact is likely. Remove and wash contaminated clothing before reuse. Discard contaminated shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Thin, black paste

Odor Threshold: Not Available

Vapor Density (Air = 1):	>1
Specific Gravity (H₂O = 1):	<2.0
Solubility in Water:	Not Available
Boiling Point:	Not Available
Freezing Point:	Not Available
Evaporation Rate:	<1 (n-butyl acetate = 1)
Vapor Pressure:	< 0.001 mm Hg @ 20 °C
Coefficient of Water/Oil Distribution:	Not Available
pH:	Not Applicable
Volatiles (Weight %):	0%
VOC Content:	0 g/l

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	Avoid heat and flame.
Materials to Avoid:	Strong acids or bases (especially primary or secondary aliphatic amines), strong oxidizing agents.
Hazardous Decomposition and By- Products:	CO ₂ , CO, aldehydes, acids and other organic substances may be formed during combustion or elevated temperature (>500°F) degradation.
Conditions Under Which Hazardous Polymerization May Occur:	When BonDuit® Resin (Part A) is mixed with BonDuit® Hardener (Part B), heat is generated. Use caution if combining and mixing more than one cartridge.

11. TOXICOLOGICAL INFORMATION

Toxicity to Animals:	Bisphenol A Diglycidyl Ether	LD ₅₀ (oral) >2000 mg/kg LD ₅₀ (dermal) >2000 mg/kg
Chronic Exposure:	Not Available	
Carcinogenic Status:	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.	
Reproductive Toxicity:	Not Available	
Mutagenicity:	Resins based on diglycidyl ether of bisphenol A have proved to be inactive when tested by in-vivo mutagenicity assays. These resins have shown activity in in-vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat-liver cells. The significance of these tests to humans is unknown.	
Teratogenicity:	Not Available	
Toxicologically Synergistic	Not Available	

Products:

12. ECOLOGICAL INFORMATION

Mobility: No information available.
Bioaccumulation: No information available.
Ecotoxicity: No information available.
Aquatic Toxicity: May be toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with National and Local Regulations.

14. TRANSPORTATION INFORMATION

UN Number: Not Listed
UN Proper Shipping Name: Not Applicable
Class and Subsidiary Risk: Not Applicable
Packing Group: Not Applicable
TDG: Not Regulated
ICAO/IATA-DGR: Not Regulated
IMDG: Not Regulated
ADR/RID: Not Regulated

15. REGULATORY INFORMATION

USA Federal and State

All components are listed on the TSCA inventory.

Hazard Categories for SARA Section 311/312 Reporting	<u>Acute</u> Yes	<u>Chronic</u> No	<u>Fire</u> No	<u>Pressure</u> No	<u>Reactive</u> No
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<u>Components</u>	CERCLA/SARA Sec 302 Hazardous Substance RQ EHS TPQ	SARA Sec. 313 Toxic Release
Components are not affected by these Superfund regulations		

European Union

Product is classified as hazardous according to European Directives 88/379/EEC and 67/548/EEC and EU Regulation (EC) No 1272/2008.

Risk Phrases: R36/38: Irritating to eyes and skin.
R43: May cause sensitization by skin contact.
R51/53: Toxic to aquatic organisms.

Safety Phrases: S2: Keep out of reach of children.
S28: After contact with skin, wash immediately with plenty of water.

S37/39: Wear suitable gloves and eye/face protection.
S61: Avoid release to the environment.

Symbol: Xi: Irritant
N: Dangerous for the environment.

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. It does not contain Substances of Very High Concern (SVHC).

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Classification: DB2 (toxic)
Canadian DSL: All ingredients listed.

Australia

All components are listed on the AICS.
Product is classified as hazardous according to criteria of NOHSC Australia.

Contact Information: ADAPT Australia Pty. Ltd.
11 - 19 Global Drive
Tullamarine Victoria 3043
Telephone Number. 03 9330 0666

Emergency Telephone Number: 0421 277 889

16. OTHER INFORMATION

NFPA Ratings: Health: 2
Fire: 1
Reactivity: 1

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

Revision Date: May 10, 2010
Revision Number: 1
Reviewed By: S. H. Dahlke

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

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Mauritsplaat 126
NL-3012CD Rotterdam
Netherlands
Tel: +31 10 233 0578

Emergency Number: +1-651-430-2270

**Product Name: BonDuit®
Gel Hardener – BT
Part B Reusable Cartridge Package**

Chemical Description: Hardener, Part B of two-part sealant

Product Use: Adhesive

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt %</u>
Polymercaptan Curing Agent	Proprietary	--	40 - 65
Polymer of C-18 Unsaturated Fatty Acid Dimers with TETA & TOFA	68082-29-1	500-191-5	10 - 15
2,4,6-Tris (Dimethylaminomethyl) Phenol	90-72-2	202-013-9	5 - 10
Polymer of C-18 Unsaturated Fatty Acid Dimers	68541-13-9	--	2 - 5
Triethylenetetramine	112-24-3	203-950-6	1 - 3

3. HAZARDS IDENTIFICATION

Emergency Overview:	Skin and eye irritant. May cause allergic skin reaction. Keep out of reach of children. Industrial use only.
Eye Contact:	Direct eye contact with material or vapors may cause severe eye irritation.
Skin Contact:	May cause severe skin irritation, especially on prolonged contact. Prolonged or repeated skin exposure may cause skin sensitization.
Irritation and Sensitization Potential:	This product has skin irritation potential. It is a sensitizer.
Inhalation (Breathing):	Excess vapor exposure may cause irritation of the nose and throat. Prolonged exposure may cause delayed lung injury and chemical pneumonia.
Ingestion (Swallowing):	Material is considered slightly toxic. Ingestion may cause irritation of the gastrointestinal tract, nausea, vomiting, and diarrhea.

4. FIRST AID MEASURES

Eye Contact:	If eye irritation from exposure to vapors develops, move to fresh air. Flush eyes with clean water. If irritation persists, seek medical attention. For direct eye contact, flush with large quantity of water for 15 minutes. Seek medical attention.
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- Skin Contact:** Remove contaminated clothing; flush skin thoroughly with water. If irritation occurs, seek medical attention.
- Inhalation (Breathing):** If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention.
- Ingestion (Swallowing):** Drink one or two glasses of milk or water. Do not induce vomiting. If victim is unconscious, place on the left side with head down. Never give anything by mouth to an unconscious person. Do not leave victim unattended. Seek medical attention.

5. FIRE-FIGHTING MEASURES

- Flash Point:** >200 °F PMCC
- Flammable Limits:** Not Available
- Autoignition Temperature:** Not Available
- Hazardous Decomposition and By-Products:** Oxides of carbon, oxides of sulfur, oxides of nitrogen.
- Extinguishing Media:** Water Fog, Carbon Dioxide, Dry Chemical or Foam.
- Special Precautions:** Full protective equipment including self-contained breathing apparatus should be used. Water spray may be used to cool fire exposed container to prevent pressure build-up and possible auto-ignition or rupture.
- Unusual Hazards:** Toxic smoke and vapors may form during combustion.

6. ACCIDENTAL RELEASE MEASURES

Major spill unlikely with small package. Residual resin may be removed using steam or hot soapy water. Dispose of according to local and federal regulations. Prevent spill from entering drainage/sewer systems, waterways, and surface waters.

7. HANDLING AND STORAGE

Keep cartridge tightly closed. Reseal cartridge after use. Avoid contact with skin, eyes, or clothing. Uncured BonDuit® Hardener Part B is a skin irritant. Use good personal hygiene practice. Provide appropriate ventilation/respiratory protection against decomposition products during welding/flame operations (i.e. torches used to install heat shrink products) on or near cured product. Keep containers cool, dark, dry, and away from sources of ignition. All cartridges should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Respiratory Protection:** None required for normal handling temperatures and conditions.
- Protective Gloves:** The use of impermeable gloves is recommended to prevent skin contact.
- Eye Protection:** Eye protection is recommended, especially if the material is used in ways where it could contact the eyes.
- Other Protective Equipment:** Use protective cream if skin contact is likely. Remove and wash contaminated clothing before reuse. Discard contaminated shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white to yellow, thin paste.
Odor Threshold:	Not Available
Vapor Density (Air = 1):	Not Available
Specific Gravity (H₂O = 1):	<2
Solubility in Water:	Not Available
Boiling Point:	Not Available
Freezing Point:	Not Available
Evaporation Rate:	Not Available
Vapor Pressure:	<1 mm Hg @ 70°F
Coefficient of Water/Oil Distribution:	Not Available
pH:	Not Applicable
Volatiles (Weight %):	0%
VOC Content:	0 g/l

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	Avoid extreme heat and open flame.
Materials to Avoid:	Strong oxidizing agents.
Hazardous Decomposition Products:	Oxides of carbon, oxides of sulfur, oxides of nitrogen.
Conditions Under Which Hazardous Polymerization May Occur:	When Hardener (Part B) is mixed with Resin (Part A), heat is generated. Use caution if combining and mixing more than one cartridge.

11. TOXICOLOGICAL INFORMATION

Toxicity to Animals:	Polymercaptan Curing Agent	LD ₅₀ (oral rat) >2000 mg/kg
	Polymer of C-18 Unsaturated Fatty Acid Dimers with TETA & TOFA	LD ₅₀ (oral rat) >2000 mg/kg LD ₅₀ (dermal rabbit) >2000 mg/kg
	2,4,6-Tris (Dimethylaminomethyl) Phenol	LD ₅₀ (oral) >2000 mg/kg
Chronic Exposure:	Not Available	
Carcinogenic Status:	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.	

Reproductive Toxicity: Not Available
Mutagenicity: Not Available
Teratogenicity: Not Available
Toxicologically Synergistic Products: Not Available

12. ECOLOGICAL INFORMATION

Mobility: No information available.
Bioaccumulation: No information available.
Ecotoxicity: No information available.

13. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with National and Local Regulations.

14. TRANSPORTATION INFORMATION

UN Number: Not Listed
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<u>Components</u>	<u>CERCLA/SARA Sec 302 Hazardous Substance RQ</u>	<u>EHS TPQ</u>	<u>SARA Sec. 313 Toxic Release</u>
Components are not affected by these Superfund regulations.			

European Union

Product is classified as hazardous according to European Directives 88/379/EEC and 67/548/EEC and EU Regulation (EC) No 1272/2008.

Risk Phrases: R43: May cause sensitization by skin contact.

Safety Phrases: S2: Keep out of reach of children.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Xi: Irritant

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. It does not contain Substances of Very High Concern (SVHC).

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Revision Number: 1
Reviewed By: S.H Dahlke

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