

MATERIAL SAFETY DATA SHEET

1. 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

**Product Name: BonDuit® Resin -
Part A Reusable Cartridge Package**

Date Reviewed: April 11, 2007

Reviewed By: S. H. Dahlke

Emergency Number: 1-651-430-2270

2. HAZARDOUS INGREDIENTS

<u>Components*</u>	<u>CAS #</u>	<u>Weight %</u>	<u>ACGIH TLV</u>	<u>OSHA TLV</u>
	proprietary		NE**	NE**

* All components are listed on the TSCA inventory and the Canadian Domestic Substance List (DSL).

** Not Established

Components listed as proprietary are considered trade secret in accordance with the OSHA Hazard and Communication Standard (29 CFR 1910.1200). Identity of proprietary components will be made available in accordance with this standard.

3. HAZARDS IDENTIFICATION

Emergency Overview

Black, thin paste. Part A resin of two-part cylinder cartridge.

Eye and skin irritant. May cause skin sensitization. In case of eye contact, flush eyes with water. Wear gloves and safety glasses. Avoid contact with skin. Use with adequate ventilation. Do not ingest. Keep out of reach of children.

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

Skin Contact: Moderate irritant. 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.

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.

Carcinogenic Status: None of the components present in this material at concentrations equal to or greater than 0.1% have been identified by IARC, NTP or OSHA as a carcinogen.

4. FIRST AID

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 soap and 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 AND EXPLOSION HAZARD

Flash Point: >400°F (PMCC)

Flammable Limits: Unknown

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

Special Procedures: 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.

Hazardous Products of Combustion: When heated to decomposition it emits carbon monoxide and other fumes and vapors varying in composition and toxicity.

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. CONTROL MEASURES

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

Ventilation: Use with adequate ventilation.

Protective Gloves: The use of impervious 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 DATA

Appearance: Thin, black paste

Vapor Pressure: Not Applicable

Specific Gravity (H₂O = 1): <2.0

Percent Volatiles (Weight): 0%

Boiling Point: Not Applicable

Vapor Density (Air = 1): >1

Solubility in Water: Negligible

Evaporation Rate: <1 (n-butyl acetate = 1)

10. REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Avoid heat and flame.

Incompatibility: Strong acids or bases (especially primary or secondary aliphatic amines), strong oxidizing agents.

Hazardous Products of Decomposition: CO₂, 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. HEALTH HAZARD/TOXICOLOGICAL INFORMATION

Refer to Section 3 for available information on potential health effects.

12. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with local, county, state, and federal regulations. As supplied, BonDuit® Resin - Part A is not considered hazardous waste under RCRA.

13. TRANSPORTATION

DOT Hazard Class: Not Regulated

DOT Shipping Name: Not Applicable

14. REGULATORY STATUS

Canada WHMIS Class: D2B (Toxic)

Hazard Categories for SARA Section 311/312 Reporting	Acute	Chronic	Fire	Pressure	Reactive
	Yes	No	No	No	No

<u>Components</u>	<u>CERCLA/SARA Sec. 302 Hazardous Substance RQ</u>	<u>EHS TPQ</u>	<u>SARA Sec. 313 Toxic Release</u>
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The components of BonDuit® Resin - Part A are not affected by these Superfund regulations.

MATERIAL SAFETY DATA SHEET**1. 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

Emergency Number: 1-651-430-2270

**Product Name: Bonduit® Hardener –
 Part B Reusable Cartridge Package**

Date Reviewed: April 11, 2007
Reviewed By: S. H. Dahlke

2. HAZARDOUS INGREDIENTS

<u>Components*</u>	<u>CAS #</u>	<u>Weight %</u>	<u>ACGIH TLV</u>	<u>OSHA TLV</u>
	Proprietary		NE**	NE**

* All components are listed on the TSCA inventory and Canadian Domestic Substance List (DSL).

** Not Established

Components listed as proprietary are considered trade secret in accordance with the OSHA Hazard and Communication Standard (29 CFR 1910.1200). Identity of proprietary components will be made available in accordance with this standard.

3. HAZARDS IDENTIFICATION*****Emergency Overview*****

Off white to yellow, thin paste. Part B hardener of two-part cylinder cartridge.

Eye and skin irritant. May cause skin sensitization. In case of eye contact, flush eyes with water. Wear gloves and safety glasses. Avoid contact with skin. Use with adequate ventilation. Do not ingest. Keep out of reach of children.

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

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.

Carcinogenic Status: None of the components present in this material at concentrations equal to or greater than 0.1% have been identified by IARC, NTP or OSHA as a carcinogen.

4. FIRST AID

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.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with water. If irritation continues, 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 AND EXPLOSION HAZARD

Flash Point: >200°F (PMCC)

Flammable Limits: Unknown

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

Special Procedures: 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.

Hazardous Products of Combustion: Oxides of carbon, oxides of sulfur, oxides of nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Major spill unlikely with small package. Rinse surface with water to remove residue. Dispose according to local and federal regulations. Prevent spill from entering drainage/sewer systems.

7. HANDLING AND STORAGE

Keep cartridge tightly closed. Reseal cartridge after use. Avoid contact with skin, eyes, or clothing. Uncured Bonduit™ Hardner, 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. CONTROL MEASURES

Respiratory Protection: None required with proper ventilation.

Ventilation: Use with adequate ventilation.

Protective Gloves: The use of impervious 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 eyes.

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

9. PHYSICAL DATA

Appearance: Thin, off-white paste;
Unpleasant, slight sulfur, pungent odor
Vapor Pressure: <<1 mm Hg @ 70°F
Specific Gravity (H₂O = 1): <2
Percent Volatiles (Weight): 0%

Boiling Point: Not determined
Vapor Density (Air = 1): Not determined
Solubility in Water: Negligible
Evaporation Rate: <1 (n-butyl acetate = 1)

10. REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Open flame and extreme heat.

Incompatibility: Strong oxidizing agents.

Hazardous Products of Decomposition: Oxides of carbon, oxides of sulfur, oxides of nitrogen.

Conditions in 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. HEALTH HAZARD/TOXICOLOGICAL INFORMATION

Refer to Section 3 for available information on potential health effects

12. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with local, county, state, and federal regulations. As supplied, BonDuit® Hardener - Part B is not considered hazardous waste under RCRA.

13. TRANSPORTATION

DOT Hazard Class: Not Regulated

DOT Shipping Name: Not Applicable

14. REGULATORY STATUS

Canada WHMIS Class: D2B (Toxic)

Hazard Categories for SARA Section 311/312 Reporting	Acute Yes	Chronic No	Fire No	Pressure No	Reactive No
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CERCLA/SARA Sec. 302

SARA Sec. 313

Components	Hazardous Substance RQ	EHS TPQ	Toxic Release
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The components of Bonduit® Hardener - Part B are not affected by these Superfund regulations

MATERIAL SAFETY DATA SHEET

1. 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

**Product Name: Type TR™
Solvent Wipe (TR-1 & TR-1L)**

Date Reviewed: April 11, 2007
Reviewed By: S. H. Dahlke

Emergency Number: 1-651-430-2270

2. HAZARDOUS INGREDIENTS

<u>Components*</u>	<u>CAS #</u>	<u>Weight %</u>	<u>ACGIH TLV</u>	<u>OSHA TWA</u>	<u>Manufacturer Recommended TLV</u>
	proprietary		NE**	NE**	90 ppm

* All components are listed on the TSCA inventory.

** Not Established.

Components listed as proprietary are considered trade secret in accordance with the OSHA Hazard and Communication Standard (29 CFR 1910.1200). Identity of proprietary components will be made available as provided in this standard.

3. HAZARDS IDENTIFICATION

Emergency Overview

Non-linting towel saturated with a non-flammable solvent azeotrope.

Keep away from fire and flame. Use with adequate ventilation. Do not ingest. Avoid contact with skin. In case of eye contact, flush eyes with water. Keep out of reach of children.

Eye Contact: Direct eye contact with vapors or splashes may cause eye irritation.

Skin Contact: Expected to be a skin irritant. Prolonged or repeated skin exposure can remove oils, causing redness, drying and cracking. Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material. Not expected to be acutely toxic.

Inhalation (Breathing): Not expected to be acutely toxic. Prolonged exposure to excessively high vapor concentrations can result in central nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue) and may cause adverse effects in the liver, lung, and kidney. Persons with impaired lung function may experience additional breathing difficulties due to the irritant properties of this material.

Ingestion (Swallowing): Not expected to be acutely toxic.

Chronic Effects of Overexposure: Long term overexposure may cause adverse effects in the liver, respiratory system, kidney, and central nervous system.

Carcinogenic Status: This substance has not been identified as a known carcinogen by NTP, IARC or OSHA, nor have any of its components.

4. FIRST AID

Eye Contact: If eye irritation from exposure to vapors develops, move to fresh air. Flush eyes with clean water. For direct eye contact, flush with large quantity of water for 15 minutes. If irritation persists, seek medical attention.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with water.

Inhalation (Breathing): If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.

Ingestion (Swallowing): Maximum amount in a single pack is less than 6 mls of solvent. If swallowed, give two glasses of water. Seek medical attention.

5. FIRE AND EXPLOSION HAZARD

Flash Point: None (TCC) for solvent (bulk)

Flammable Limits: Approximately 3-8% in air.

Extinguishing Media: None required.

Special Procedures: Use self-contained breathing apparatus. Use water spray or fog to cool exposed equipment and containers. Do not breathe smoke or vapors. Towelettes may ignite.

Hazardous Thermal Decomposition Products: Include hydrogen bromide, bromine and oxides of carbon. Include oxides of nitrogen.

6. ACCIDENTAL RELEASE MEASURES

No spill hazard with saturated towel package.

7. HANDLING AND STORAGE

Keep boxes containing solvent wipes closed. Keep towelettes cool, dry, and away from sources of ignition. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practice. All towelettes should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

8. CONTROL MEASURES

Respiratory Protection: Towelette contains limited solvent. Normal ventilation adequate. If exposure exceeds recommended limits, respirator protection is recommended. Use a respirator or gas mask with cartridges for organic vapors (NIOSH approved) or use supplied air equipment.

Protective Gloves: For repeated or prolonged skin contact, the use of impermeable gloves is recommended to prevent drying and possible irritation.

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

Other Protective Equipment: It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL DATA

Appearance: A non-linting towel, lightly saturated with clear, colorless liquid

Vapor Pressure of Solvent: 139 mm Hg @ 25°C/77°F

Specific Gravity of Solvent (H₂O = 1): 1.33

Percent Volatiles of Solvent (Weight): 100%

Boiling Point of Solvent: IBP - 160°F / 71°C

Vapor Density of Solvent (Air = 1): >1

Solubility in Water of Solvent: Very slightly soluble.

Evaporation Rate of Solvent: >1 (n-butyl acetate = 1)

10. REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: Will not occur.

Incompatibility: Avoid heat, flame or other hot surfaces that could cause thermal decomposition.

Materials to Avoid: Strong alkalis, oxidizers and reactive metals (i.e. potassium, sodium, etc.).

11. HEALTH HAZARD/TOXICOLOGICAL INFORMATION

Refer to Section 3 for available information on potential health effects

12. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with local, county, state, and federal regulations. The Type TR™ Solvent Wipes are not considered hazardous waste under RCRA.

13. TRANSPORTATION

DOT Hazard Class: Not Regulated

DOT Shipping Name: Not Regulated

14. REGULATORY STATUS

Canada WHMIS Class: Class D, Division 2B

Hazard Categories for SARA Section 311/312 Reporting

Acute
Yes

Chronic
Yes

Fire
No

Pressure
No

Reactive
No

Components

**CERCLA/SARA Sec. 302
Hazardous Substance RQ**

EHS TPQ

**SARA Sec. 313
Toxic Release**

1,2-Butylene Oxide*

Yes (100 lbs)

No

No

*Type TR™ Solvent Wipes contain <1% 1,2-Butylene Oxide as a stabilizer.