

Permatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06106 USA
 Telephone: 1-87-Permatex
 (877) 376-2839
 Emergency: 800-255-3924

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: 14600P COLD WELD BONDING COMPOUND PART 1
Item No: PTX202005G
Product Type: Epoxy resin

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percent	ACGIH 8 Hr. TWA:	OSHA 8 Hr. TWA:
EPOXY RESIN (EPICHLOROHYDRIN, BISPHENOL A) 25085-99-8	40-50	Not established	Not established
BARIUM SULFATE 7727-43-7	30 -40	10 mg/m ³ ; total dust	5 mg/m ³ resp. dust
NEPHELINE SYENITE 37244-96-5	15-25	10 mg/m ³ TWA inhal.	5 mg/m ³ TWA respir.
IRON OXIDE BLACK 1317-61-9	1-10	5 mg/m ³	10 mg/m ³
ELASTOMER MODIFIED DIGLYCIDYL ETHER 68909-14-8	1-10	Not Listed	Not Listed
TREATED SILICON DIOXIDE, SYNTHETIC, CRYSTALLINE-FREE 67762-90-7	1-10	Not Listed	10 mg/m ³ total dust

3. HAZARDS IDENTIFICATION

Toxicity: Note: This product does not contain microcrystalline silica. May cause eye and skin irritation. May cause skin sensitization. Exposure to vapors or mist may result in irritation of the respiratory tract. Repeated and prolonged inhalation of iron oxide dust may cause a benign pneumoconiosis called siderosis. This is not associated with pulmonary fibrosis unless there is concurrent exposure to other fibrosis-producing materials. When heated to temperatures above 300 degrees F. in the presence of air, this product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Safe handling conditions may be maintained by keeping vapor concentrations below the OSHA permissible limit for formaldehyde.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation.

Signs and Symptoms of Exposure: May cause skin irritation. Repeated skin contact may cause allergic skin reactions. Slightly irritating to eyes, but does not injure eye tissue. Inhalation overexposure may cause irritation, coughing and flu-like symptoms.

Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
EPOXY RESIN (EPICHLOROHYDRIN, BISPHENOL A) 25085-99-8	40-50			Bisphenol A; Group 3, Vol. 71, pg 1285; 1999
BARIUM SULFATE 7727-43-7	30 -40		Group A4 - Not classifiable	

Medical Conditions Recognized as Being Aggravated by Exposure: May aggravate preexisting dermatitis. Persons with respiratory problems such as emphysema and asthma should avoid inhalation.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention..

Inhalation: Move to fresh air in case of accidental inhalation of vapors. Oxygen or artificial respiration if needed. Obtain medical attention.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes If skin irritation persists, call a physician

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C):	485 degrees F. Method: PMCC
Recommended Extinguishing Media:	Carbon Dioxide, Dry Chemicals, Foam.
Special Fire-Fighting Procedures:	Firefighters should wear self-contained breathing apparatus. Use water spray to cool exposed containers.
Hazardous Products Formed by Fire or Thermal Decomposition:	Carbon monoxide, Aldehydes, Phenolics
Unusual Fire/Explosion Hazards:	None
Lower Explosive Limit:	Not determined.
Upper Explosive Limit:	Not determined.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures:	Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Prevent from entering waterways or sewers.
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7. HANDLING AND STORAGE

Storage:	Store away from heat. Store in a cool, dry area.
Handling:	Avoid contact with vapors from heated material. Avoid contact with skin and eyes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes:	Safety glasses.
Skin:	rubber or plastic gloves Wash contaminated clothing before re-use
Ventilation:	General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product.
Respiratory Protection:	An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits..

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black liquid
Odor:	Epoxy odor.
Boiling Point (°F):	Greater than 300 degrees F.
pH:	Does not apply
Solubility in Water:	Negligible
Specific Gravity:	Not determined
VOC Content(Wt.%):	None
Vapor Pressure:	Not applicable
Vapor Density (Air=1):	Heavier than air
Evaporation Rate:	<1 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Chemical Stability:	STABLE
Hazardous Polymerization:	Will autopolymerize at very high temperatures.
Incompatibilities:	Acids, Avoid contact with bases and strong oxidizers. Amines.
Conditions to Avoid:	Excess heating above 150 degrees F. over long periods of time degrades the resin.
Hazardous Products Formed by Fire or Thermal Decomposition:	Carbon monoxide, Aldehydes, Phenolics

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: NONE
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: not regulated
Class or Division: None
UN/NA Number: None

IMDG

Proper Shipping: Unrestricted
Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

SARA 313 Information

NONE

CALIFORNIA PROP 65:

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA Inventory Status:

Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 1, REACTIVITY 0

Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.

HMIS is a registered trademark of the National Paint and Coatings Assn.

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Revision Date: 03/15/2005

Revision Number: 2

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Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: 14600 COLD WELD BONDING COMPOUND 2OZ. PART 2
Item No: PTX203008G
Product Type: Curing agent

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percent	ACGIH 8 Hr. TWA:	OSHA 8 Hr. TWA:
MERCAPTAN POLYMER MIXTURE	35-45	Not Listed	Not Listed
BARIUM SULFATE 7727-43-7	35-45	10 mg/m ³ ; total dust	5 mg/m ³ resp. dust
NEPHELINE SYENITE 37244-96-5	1-10	10 mg/m ³ TWA inhal.	5 mg/m ³ TWA respir.
TALC 14807-96-6	1-10	2 mg/m ³ respir. dust TWA	2 mg/m ³ TWA
2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL 90-72-2	1-10	Not Listed	Not Listed
TITANIUM DIOXIDE 13463-67-7	1-10	10 mg/m ³	10 mg/m ³ ; 15 mg/m ³ total dust
TREATED SILICON DIOXIDE, SYNTHETIC, CRYSTALLINE-FREE 67762-90-7	1-10	Not Listed	10 mg/m ³ total dust

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye, skin and respiratory irritation. May be harmful if swallowed. The aminophenol can cause severe irritation and may be corrosive on prolonged contact. It may be a sensitizer. It can also be corrosive to eye tissue, leading to permanent injury including blindness. It may irritate the respiratory tract and may cause delayed lung damage upon overexposure to fumes or vapors. It can cause fatigue, muscular weakness, labored breathing or gastrointestinal irritation if swallowed. The relatively low concentration of the aminophenol in the product may minimize some or all of these effects. This product contains encapsulated silicon dioxide (quartz silica). No exposure to free respirable silica is anticipated during normal use of this product. Silica may be released by grinding or machining of coated material. Use NIOSH-approved dust/mist respirator when grinding or machining. When heated to temperatures above 300 degrees F. in the presence of air, this product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Safe handling conditions may be maintained by keeping vapor concentrations below the OSHA permissible limit for formaldehyde.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation.
Signs and Symptoms of Exposure: Eyes: Exposure to liquid or vapor causes mild eye irritation. Symptoms may include burning, tearing, redness, stinging, blurred vision and corneal injury. Ingestion may cause nausea and vomiting. Inhaling may cause mild irritation to the nose, throat and respiratory tract and may result in central nervous system (CNS) depression. Inhalation overexposure may cause irritation, coughing and flu-like symptoms.

Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
BARIUM SULFATE 7727-43-7	35-45		Group A4 - Not classifiable	
TITANIUM DIOXIDE 13463-67-7	1-10	Not listed	Not listed	Group 3; Vol 47, pg 307, 1989

Medical Conditions Recognized as Being Aggravated by Exposure: Persons with respiratory problems such as emphysema and asthma should avoid inhalation. Preexisting skin disorders.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention..

Inhalation: Move to fresh air in case of accidental inhalation of vapors. Oxygen or artificial respiration if needed. Obtain medical attention.
Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): Greater than 300 degrees F.
Recommended Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.
Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Use water spray to cool exposed containers.
Hazardous Products Formed by Fire or Thermal Decomposition: Oxides of nitrogen, Hydrogen sulfide, Ammonia
Unusual Fire/Explosion Hazards: Irritating or toxic gases or fumes may be generated by thermal decomposition or combustion.
Lower Explosive Limit: Not determined.
Upper Explosive Limit: Not determined.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store in a cool, dry area. Keep away from oxidizers.
Handling: Avoid contact with skin and eyes. Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Discard contaminated leather gloves and shoes. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses.
Skin: Neoprene or nitrile gloves recommended.
Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product.
Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits..

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white liquid
Odor: irritating
Boiling Point (°F): Not determined
pH: Alkaline
Solubility in Water: Moderate
Specific Gravity: Not Determined
VOC Content(Wt.%): Not determined
Vapor Pressure: Not Determined
Vapor Density (Air=1): Heavier than air
Evaporation Rate: <1 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Chemical Stability: STABLE
Hazardous Polymerization: Will not occur
Incompatibilities: Strong oxidizers, alkalies, mineral acids, selected amines. Avoid contact with bases and strong oxidizers.
Conditions to Avoid: Heat
Hazardous Products Formed by Fire or Thermal Decomposition: Oxides of nitrogen, Hydrogen sulfide, Ammonia

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.

US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name:	Unrestricted
Hazard Class:	NONE
UN/ID Number:	None
Marine Pollutant:	None

IATA

Proper Shipping Name:	not regulated
Class or Division:	None
UN/NA Number:	None

IMDG

Proper Shipping:	Unrestricted
Hazard Class:	None
UN Number:	None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

SARA 313 Information

NONE

CALIFORNIA PROP 65:

No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:

Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 1, REACTIVITY 0

Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 1, PHYSICAL HAZARD 0

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2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL 90-72-2	1-10	Not Listed	Not Listed
TITANIUM DIOXIDE 13463-67-7	1-10	10 mg/m ³	10 mg/m ³ ; 15 mg/m ³ total dust
TREATED SILICON DIOXIDE, SYNTHETIC, CRYSTALLINE-FREE 67762-90-7	1-10	Not Listed	10 mg/m ³ total dust

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye, skin and respiratory irritation. May be harmful if swallowed. The aminophenol can cause severe irritation and may be corrosive on prolonged contact. It may be a sensitizer. It can also be corrosive to eye tissue, leading to permanent injury including blindness. It may irritate the respiratory tract and may cause delayed lung damage upon overexposure to fumes or vapors. It can cause fatigue, muscular weakness, labored breathing or gastrointestinal irritation if swallowed. The relatively low concentration of the aminophenol in the product may minimize some or all of these effects. This product contains encapsulated silicon dioxide (quartz silica). No exposure to free respirable silica is anticipated during normal use of this product. Silica may be released by grinding or machining of coated material. Use NIOSH-approved dust/mist respirator when grinding or machining. When heated to temperatures above 300 degrees F. in the presence of air, this product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Safe handling conditions may be maintained by keeping vapor concentrations below the OSHA permissible limit for formaldehyde.

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Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
BARIUM SULFATE 7727-43-7	35-45		Group A4 - Not classifiable	
TITANIUM DIOXIDE 13463-67-7	1-10	Not listed	Not listed	Group 3; Vol 47, pg 307, 1989

Medical Conditions Recognized as Being Aggravated by Exposure: Persons with respiratory problems such as emphysema and asthma should avoid inhalation. Preexisting skin disorders.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention..

Inhalation: Move to fresh air in case of accidental inhalation of vapors. Oxygen or artificial respiration if needed. Obtain medical attention.
Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): Greater than 300 degrees F.
Recommended Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.
Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Use water spray to cool exposed containers.
Hazardous Products Formed by Fire or Thermal Decomposition: Oxides of nitrogen, Hydrogen sulfide, Ammonia
Unusual Fire/Explosion Hazards: Irritating or toxic gases or fumes may be generated by thermal decomposition or combustion.
Lower Explosive Limit: Not determined.
Upper Explosive Limit: Not determined.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store in a cool, dry area. Keep away from oxidizers.
Handling: Avoid contact with skin and eyes. Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Discard contaminated leather gloves and shoes. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses.
Skin: Neoprene or nitrile gloves recommended.
Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product.
Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits..

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white liquid
Odor: irritating
Boiling Point (°F): Not determined
pH: Alkaline
Solubility in Water: Moderate
Specific Gravity: Not Determined
VOC Content(Wt.%): Not determined
Vapor Pressure: Not Determined
Vapor Density (Air=1): Heavier than air
Evaporation Rate: <1 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Chemical Stability: STABLE
Hazardous Polymerization: Will not occur
Incompatibilities: Strong oxidizers, alkalies, mineral acids, selected amines. Avoid contact with bases and strong oxidizers.
Conditions to Avoid: Heat
Hazardous Products Formed by Fire or Thermal Decomposition: Oxides of nitrogen, Hydrogen sulfide, Ammonia

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.

US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: NONE
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: not regulated
Class or Division: None
UN/NA Number: None

IMDG

Proper Shipping: Unrestricted
Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

SARA 313 Information

NONE

CALIFORNIA PROP 65:

No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:

Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 1, REACTIVITY 0

Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 1, PHYSICAL HAZARD 0

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