

SAFETY DATA SHEET – SET

PowerPatch® Leak Repair Cartridge Kit

Product ID numbers: EPCT-KIT1LG (Tool Included)
EPCT-KIT1L (Cartridge replacement – No Tool)

Date Compiled: March 8, 2022



Supplier/Manufacturer:

American Polywater Corporation

11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

Emergency telephone numbers

INFOTRAC: 1-800-535-5053 (USA) 1-352-323-3500 (INT'L)

This product is a kit or a multi-part product with independent components. An SDS for each component is included. Do not separate SDSs.

Contains

PowerPatch EPCT Cartridge Sealant Part A SDS
PowerPatch EPCT Cartridge Sealant Part B SDS
PowerPatch Putty Stick SDS
Type LoVoC Low VOC Cleaning Wipe SDS

SDSs are classified according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Each Kit may or may not contain all SDS components

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.

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name:
**PowerPatch® Cartridge Leak Repair Gel EPCT
(Part A) SEALANT 84251**

Product ID numbers: EPCT-KIT1, EPCT-KIT1G, EPCT-KITB6, EPCT-KITB6G;
EPCT-XXX (Where XXX is the package code.)

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Sealant/adhesive resin, Part A of 2-Part Sealant

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

1.4 Emergency telephone numbers

INFOTRAC: 1-800-535-5053 1-352-323-3500

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Skin Irrit 2	H315
Skin Sens 1	H317
Eye Irrit 2A	H319

2.2 Label elements

Contains: Bisphenol A-epichlorohydrin polymer



Pictograms:

Signal word: Warning

Hazard Statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

Precautionary Statements:

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves, protective clothing and eye protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.

P333 + P313	If skin irritation or rash occurs: Get medical attention.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical attention.
P362 + P364	Take off contaminated clothing.
P501	Dispose of container in accordance with local regulations

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt. %</u>
Bisphenol A-epichlorohydrin polymer	25068-38-6	500-033-5	80 - 95

This product contains no other reportable hazardous components under OSHA 29 CFR 1910, 1200 Canada and European Regulation (EC) No 1272/2008. No additional ingredients require reporting based on applicable concentration and current supplier knowledge.

4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with large quantity of water for 15 minutes. Seek medical attention.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with soap and water for at least 15 minutes. If irritation or allergic reaction 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): No emergency medical treatment necessary

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Water fog or fine spray, dry chemical carbon dioxide, or foam.

5.2 Special hazards arising from the substance or mixture

Dense smoke is emitted when burned without sufficient oxygen.

Hazardous decomposition and by-products:

CO₂, CO, phenolics. May contain other combustion products of varying composition which may be toxic or irritating.

5.3 Advice for firefighters

Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Water fog may be used to cool fire exposed container to prevent pressure build-up and possible auto-ignition or rupture. Direct water stream may spread fire.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate area. Use appropriate safety equipment.

6.2 Environmental precautions:

Avoid release to the environment. Prevent spill from entering drainage/sewer systems, waterways, basements or confined areas. Refer to Section 12 for more information.

6.3 Methods materials for containment and cleaning up:

Absorb spill with sand or absorbents. Residual resin may be removed using steam or hot soapy water. Collect as much of the spilled material as possible using non-sparking tools and transfer to a container. Seal the container. Residual material can be removed with solvent.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage**7.1 Precautions for safe handling**

Avoid personal contact with the product. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Keep containers cool, dry, and away from sources of ignition. Keep containers and cartridges capped and sealed. Protect from freezing. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection**8.1 Control parameters****Exposure limits and recommendations:**

Contains no components with established Occupational Exposure Limit (OEL) values.

8.2 Exposure controls**Respiratory protection:**

Normal ventilation is adequate. If exposure exceeds recommended limits, respirator protection is recommended. Wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced. Use a respirator or gas mask with cartridges for organic vapors (NIOSH or CE approved) with particulate pre-filter, P100 or AP2.

Protective gloves:

The use of chemically resistant gloves is recommended to prevent skin contact. Suitable materials include nitrile (included in most kits), neoprene, ethyl vinyl alcohol (EVAL), PVC. Use a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374). NOTE: The selection of specific glove for the application should account for other chemicals in the environment, physical requirements and potential user reaction to the glove material.

Eye protection:

Safety glasses recommended.

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****9.1 Information of basic physical and chemical properties**

Appearance:	Dark gray or black gel.
Odor threshold:	Not available
pH:	Does not apply
Freezing point:	Not available

Boiling point:	Not available
Flash point:	>400°F / >200°C (PMCC)
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Upper/lower flammability or explosive limits:	Not available
Vapor pressure:	< 0.001 mm Hg @ 20°C
Vapor density (Air = 1):	>1
Specific gravity (H₂O = 1):	1.25 @ 25°C
Solubility in water:	Not available
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available

9.2 Other Information

Volatiles (Weight %):	0%
VOC Content:	0 g/l

10. Stability and Reactivity

10.1 Reactivity:

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions to avoid:

Avoid high temperatures above 300 °C (572 °F). Decomposition can occur above 350 °C (662 °F). Generation of gas during decomposition can cause pressure to build in closed systems.

10.5 Incompatible materials :

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

10.6 Hazardous decomposition products:

CO₂, CO, phenolics and other organic substances may be formed during combustion or elevated temperature degradation.

11. Toxicological Information

11.1 Information on toxicological effects:

Acute toxicity

Eye contact:

Direct eye contact with material or vapors may cause eye irritation.

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:

May cause allergic skin reaction.

Inhalation (Breathing):

Low vapor pressure makes this route of exposure unlikely.

Ingestion:

Ingestion may cause irritation of the gastrointestinal tract.

Toxicity to Animals:

Bisphenol A Diglycidyl Ether: LD₅₀ (oral rat) >15,000 mg/kg
 LD₅₀ (dermal rabbit) 23,000 mg/kg

Aspiration Hazard:

No aspiration hazard expected.

Chronic Exposure:

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.
Specific Target Organ Toxicity (STOT) Not available.
Toxicologically Synergistic Products: 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.

12. Ecological Information

12.1 Toxicity:

Aquatic Toxicity: May be toxic to aquatic organisms.
 Bisphenol A Diglycidyl Ether: LC₅₀ (96 hr.): 2 mg/l Oncorhynchus mykiss (rainbow trout)
 Semi-static test
 Bisphenol A Diglycidyl Ether: EC₅₀ (48 hr.): 1.8 mg/l Daphnia magna (invertebrate)
 Static test
 Bisphenol A Diglycidyl Ether: ErC₅₀ (72 hr.): 11 mg/l Fresh water algae (aquatic plants)
 Static test
 Bisphenol A Diglycidyl Ether: Chronic Toxicity Value: Daphnia magna (invertebrate), 21 d, number of offspring, NOEC: 0.3 mg/l
 Semi-static test

12.2 Persistence and degradability:

Based on stringent OECD test guidelines, this material cannot be considered readily biodegradable. Biodegradability depends on environmental conditions.
 Bisphenol A Diglycidyl Ether: OECD Biodegradation Test 302B
 12% Biodegradation, 28 d exposure
 Bisphenol A Diglycidyl Ether: Theoretical Oxygen Demand
 2.35 mg/mg

12.3 Bioaccumulation potential:

Bioconcentration potential is moderate.

12.4 Mobility in soil:

Potential for mobility in soil is low..

12.5 Results of PBT and vPvB Assessment:

This product is not, nor does it contain a substance that is a PBT or vPvB.

12.6 Other adverse effects:

None known.

13. Disposal Considerations

Do not dump into sewer, on ground or into any body of water. Dispose of product in accordance with National and Local Regulations.

14. Transport Information

DOT:	Not Regulated
UN Number:	3082
UN Proper Shipping Name:	Environmentally hazardous substance, liquid, N.O.S. (Bisphenol A)
Class and Subsidiary Risk:	9
Packing Group:	III
ICAO/IATA-DGR:	Not Regulated (See Special Provision A197)
IMDG:	Not Regulated (See IMDG Code 2.10.2.7)
ADR/RID:	9
Other information	For surface shipments within the United States: Not regulated.

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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 <u>Hazardous Substance RQ</u>	EHS TPQ	SARA Sec. 313 <u>Toxic Release</u>
The components of PowerPatch®-Leak Sealant Gel - Part A are not affected by these Superfund regulations.			

NFPA Ratings:	Health:	1
	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.

California Proposition 65

WARNING: This product can expose you to 2-(phenoxymethyl)-oxirane which is known to the state of California to cause cancer, and 4,4'-(1-methylethylidene)bis-phenol which is known to the State of California to cause birth defects and/or other reproductive harm. For more information, go to www.p65warnings.ca.gov.

European Union

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list ≥ 0.1% SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

Canada

All components are listed on the DSL inventory. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Australia

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

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:

OSHA = Occupational Safety and Health Administration
CLP = Classification, Labeling and Packaging Regulation
STOT = Specific Target Organ Toxicity
LD₅₀ = Median Lethal Dose
DNEL = Derived No Effect Level
ACGIH = American Conference of Governmental Industrial Hygienists
TSCA = Toxic Substances Control Act (USA)
DSL = Domestic Substances List (Canada)
AICS = Australian Inventory of Chemical Substances

Mixture classification according to Regulation (EC) No 1272/2008:

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.

Classification Procedure

- Calculation method.
- Calculation method.
- Calculation method.

Revision Date: March 4, 2022
Revision Number: 11
Supersedes: February 29, 2020
Other: Not Applicable
Indication of Changes: Section 8, 15 updated; added PPE pictograms, updated California Proposition 65 status.
Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format)

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.

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name:
**PowerPatch® Cartridge Leak Repair Gel EPCT
(Part B) SEALANT 84261**

Product ID numbers: EPCT-KIT1, EPCT-KIT1G, EPCT-KITB6, EPCT-KITB6G;
EPCT-XXX (Where XXX is the package code.)

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Sealant/adhesive resin, Part B of 2-Part Sealant

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

1.4 Emergency telephone numbers

INFOTRAC: 1-800-535-5053 1-352-323-3500

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Skin Irritation, Cat 2; H315

Eye Irritation, Cat 2; H319

Skin Sensitization, Cat 1; H317

2.2 Label elements

Contains

Polymer of C-18 Unsaturated Fatty Acid Dimers, 1,3-bis[3-(Dimethylamino)propyl] urea, Triethylenetetramine, Diethylene glycol bis (3-aminopropyl) ether



Pictograms:

Signal word:

Warning

Hazard Statements:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary Statements:

P264 Wash thoroughly after handling.
P280 Wear protective gloves, protective clothing and eye protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P332 + P313 If skin irritation occurs: Get medical attention..

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists. Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container in accordance with local and national regulations.

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt. %</u>
Polymer of C-18 Unsaturated Fatty Acid Dimers with TETA & TOFA	68082-29-1	500-191-5	10 - 15
1,3-bis[3-(Dimethylamino)propyl] urea	52338-87-1	257-861-2	3 - 7
Polymer of C-18 Unsaturated Fatty Acid Dimers	68541-13-9	--	3 - 7
Triethylenetetramine	112-24-3	203-950-6	1 - 3
Diethylene glycol bis (3-aminopropyl) ether	4246-51-9	224-207-2	1 - 3

This product contains no other reportable hazardous components under OSHA 29 CFR 1910, 1200 Canada and European Regulation (EC) No 1272/2008. No additional ingredients require reporting based on applicable concentration and current supplier knowledge.

4. First Aid Measures

4.1 Description of first aid measures

Eye Contact:	Immediately flush eyes with large quantity of water for 15 minutes. Seek medical attention.
Skin Contact:	Remove contaminated clothing; flush skin thoroughly with soap and water for at least 15 minutes. If irritation or allergic reaction 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):	Wash out mouth with 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.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Water fog or fine spray, dry chemical carbon dioxide, or foam.

5.2 Special hazards arising from the substance or mixture

Dense smoke is emitted when burned without sufficient oxygen.

Hazardous decomposition and by-products:

Oxides of carbon, oxides of sulfur, oxides of nitrogen. May contain other combustion products of varying composition which may be toxic or irritating.

5.3 Advice for firefighters

Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Water fog may be used to cool fire exposed container to prevent pressure build-up and possible auto-ignition or rupture. Direct water

stream may spread fire.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate area. Use appropriate safety equipment.

6.2 Environmental precautions:

Avoid release to the environment. Refer to Section 12 for more information.

6.3 Methods materials for containment and cleaning up:

Absorb spill with sand or absorbents. Residual resin may be removed using steam or hot soapy water. Collect as much of the spilled material as possible using non-sparking tools and transfer to a container. Seal the container. Residual material can be removed with solvent.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Avoid personal contact with the product. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Keep containers cool, dry, and away from sources of ignition. Keep containers and cartridges capped and sealed. Protect from freezing. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

Contains no components with established Occupational Exposure Limit (OEL) values.

8.2 Exposure controls

Respiratory protection:

Normal ventilation is 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:

The use of chemically resistant gloves is recommended to prevent skin contact. Suitable materials include nitrile (included in most kits), neoprene, ethyl vinyl alcohol (EVAL), PVC.

Eye protection:

Safety glasses recommended.

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**9.1 Information of basic physical and chemical properties**

Appearance:	White to yellow gel; slight sulfur, pungent odor.
Odor threshold:	Not available
pH:	Does not apply
Freezing point:	Not available
Boiling point:	Not available
Flash point:	>200°F / >90°C (PMCC)
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Upper/lower flammability or explosive limits:	Not available
Vapor pressure:	<1 mm Hg @ 20°C
Vapor density (Air = 1):	Not available
Specific gravity (H₂O = 1):	1.2 @ 20°C
Solubility in water:	Not available
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available

9.2 Other Information

Volatiles (Weight %):	0%
VOC Content:	0 g/l

10. Stability and Reactivity**10.1 Reactivity:**

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions to avoid:

Avoid extreme heat and open flame.

10.5 Incompatible materials :

Strong oxidizing agents.

10.6 Hazardous decomposition products:

Oxides of carbon, oxides of sulfur, oxides of nitrogen and other organic substances may be formed during combustion or elevated temperature degradation.

11. Toxicological Information**11.1 Information on toxicological effects:****Acute toxicity****Eye contact:**

Direct eye contact with material or vapors may cause 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 high skin irritation potential. It is a sensitizer.

Inhalation (Breathing):

Low vapor pressure makes this route of exposure unlikely. No known significant hazard.

Ingestion:

Material is considered slightly toxic. Ingestion may cause irritation of the gastrointestinal tract, nausea, vomiting, and diarrhea.

Toxicity to Animals:

Polymercaptan amine blend	LD ₅₀ (oral rat) >2,000 mg/kg
Polymer of C-18 Unsaturated Fatty Acid	
Dimers with TETA & TOFA	LD ₅₀ (oral rat) >2,000 mg/kg
	LD ₅₀ (dermal rabbit) >2,000 mg/kg
Triethylenetetramine	LD ₅₀ (oral rat) 2,780 mg/kg
	LD ₅₀ (dermal rabbit) 550 mg/kg

Aspiration Hazard:

No aspiration hazard expected.

Chronic Exposure:

Reproductive Toxicity:	Not available.
Mutagenicity:	Not available.
Teratogenicity:	Not available.
Specific Target Organ Toxicity (STOT)	Not available.
Toxicologically Synergistic Products:	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.

12. Ecological Information

12.1 Toxicity:

Aquatic Toxicity: Not available.

12.2 Persistence and degradability: Not available.

12.3 Bioaccumulation potential: Not available.

12.4 Mobility in soil: Not available.

12.5 Results of PBT and vPvB Assessment: This product is not, nor does it contain a substance that is a PBT or vPvB.

12.6 Other adverse effects: None known.

13. Disposal Considerations

Do not dump into sewer, on ground or into any body of water. Dispose of product in accordance with National and Local Regulations.

14. Transport Information

DOT: Not Regulated

UN Number: Not Listed

UN Proper Shipping Name: Not Applicable

Class and Subsidiary Risk: Not Applicable
Packing Group: Not Applicable
ICAO/IATA-DGR: Not Regulated
IMDG: Not Regulated
ADR/RID: Not Regulated

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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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Components	CERCLA/SARA Sec 302 Hazardous Substance RQ	EHS TPQ	SARA Sec. 313 Toxic Release
The components of PowerPatch®-Leak Sealant Gel - Part B are not affected by these Superfund regulations.			

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.

California Proposition 65

WARNING: This product can expose you to chemicals including sulphuric acid, nitrilotriacetic acid, which is/are known to the State of California to cause cancer. For more information, go to www.p65warnings.ca.gov.

European Union

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list ≥ 0.1% SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

Canada

All components are listed on the DSL inventory. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Australia

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

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:

OSHA = Occupational Safety and Health Administration
 CLP = Classification, Labeling and Packaging Regulation
 STOT = Specific Target Organ Toxicity
 LD₅₀ = Median Lethal Dose
 DNEL = Derived No Effect Level

Product Name: PowerPatch® Cartridge Leak Repair Gel (Part B) Type EPCT

Revision Date: March 4, 2022

ACGIH = American Conference of Governmental Industrial Hygienists

TSCA = Toxic Substances Control Act (USA)

DSL = Domestic Substances List (Canada)

AICS = Australian Inventory of Chemical Substances

Mixture classification according to Regulation (EC) No 1272/2008:

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.

Classification Procedure

- Calculation method.
- Calculation method.
- Calculation method.

Revision Date: March 4, 2022

Revision Number: 9 NA

Supersedes: September 20, 2018

Other: Not Applicable

Indication of Changes: Section 8, 15 updated; added PPE pictograms and revised California Proposition 65 information. Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format).

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.

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name:
PowerPatch® Putty Stick (EP-STICK)
Part Numbers: 50822, 51043

Product ID numbers: EP-STICK4;
Contained in EP-KITXXX (Where XXX is the package code.)

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: 2-Part Putty Sealant for temporary repair

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

1.4 Emergency telephone numbers

INFOTRAC: 1-800-535-5053 (USA) 1-352-323-3500 (INT'L)

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Skin Irrit 2	H315
Skin Sens 1	H317
Eye Irrit 2B	H319

2.2 Label elements

Contains Bisphenol A-epichlorohydrin polymer



Pictograms:

Signal word: Warning

Hazard Statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

Precautionary Statements:

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves, protective clothing and eye protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.

P333 + P313	If skin irritation or rash occurs: Get medical attention.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical attention.
P362 + P364	Take off contaminated clothing.
P501	Dispose of container in accordance with local regulations

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt. %</u>
Bisphenol A-epichlorohydrin polymer	25068-38-6	500-033-5	10 - 30

4. First Aid Measures

4.1 Description of first aid measures

- Eye Contact:** Immediately flush eyes with large quantity of water for 15 minutes. Seek medical attention.
- Skin Contact:** Remove contaminated clothing; flush skin thoroughly with soap and water for at least 15 minutes. If irritation or allergic reaction 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):** No emergency medical treatment necessary

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Water fog or fine spray, dry chemical carbon dioxide, or foam.

5.2 Special hazards arising from the substance or mixture

Dense smoke is emitted when burned without sufficient oxygen.

Hazardous decomposition and by-products:

CO₂, CO, phenolics. May contain other combustion products of varying composition which may be toxic or irritating.

5.3 Advice for firefighters

Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Water fog may be used to cool fire exposed container to prevent pressure build-up and possible auto-ignition or rupture. Direct water stream may spread fire.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate area. Use appropriate safety equipment.

6.2 Environmental precautions:

Avoid release to the environment. Prevent spill from entering drainage/sewer systems, waterways, basements or confined areas. Refer to Section 12 for more information.

6.3 Methods materials for containment and cleaning up:

Absorb spill with sand or absorbents. Residual resin may be removed using steam or hot soapy water. Collect as much of the spilled material as possible using non-sparking tools and transfer to a container. Seal the container. Residual material can be removed with solvent.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage**7.1 Precautions for safe handling**

Avoid personal contact with the product. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Keep containers cool, dry, and away from sources of ignition. Keep containers and cartridges capped and sealed. Protect from freezing. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection**8.1 Control parameters****Exposure limits and recommendations:**

Contains no components with established Occupational Exposure Limit (OEL) values.

A Derived No Effect Level (DNEL) of 12.25 mg/m³ has been established for Acute Inhalation.

8.2 Exposure controls**Respiratory protection:**

Normal ventilation is adequate. If exposure exceeds recommended limits, respirator protection is recommended. Wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced. Use a respirator or gas mask with cartridges for organic vapors (NIOSH or CE approved) with particulate pre-filter, P100 or AP2.

Protective gloves:

The use of chemically resistant gloves is recommended to prevent skin contact. Suitable materials include nitrile (included in most kits), neoprene, ethyl vinyl alcohol (EVAL), PVC. Use a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374). NOTE: The selection of specific glove for the application should account for other chemicals in the environment, physical requirements and potential user reaction to the glove material.

Eye protection:

Safety glasses recommended.

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****9.1 Information of basic physical and chemical properties**

Appearance:	Gray/dark gray, solid putty stick. Pungent, sulfurous odor.
Odor threshold:	Not available
pH:	Not available
Freezing point:	Not available
Boiling point:	Not available
Flash point:	>199.9°F / >93.3°C (PMCC)

Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Upper/lower flammability or explosive limits:	Not available
Vapor pressure:	Not available
Vapor density (Air = 1):	Not available
Specific gravity (H₂O = 1):	2.247
Solubility in water:	Not available
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	>392°F / >200°C
Viscosity:	Not available (thick putty)

9.2 Other Information

Volatiles (Weight %):	<0.1%
VOC Content:	0 g/l

10. Stability and Reactivity

10.1 Reactivity:

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions to avoid:

Avoid high temperatures above 300 °C (572 °F). Decomposition can occur above 350 °C (662 °F). Generation of gas during decomposition can cause pressure to build in closed systems.

10.5 Incompatible materials :

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

10.6 Hazardous decomposition products:

CO₂, CO, phenolics and other organic substances may be formed during combustion or elevated temperature degradation.

11. Toxicological Information

11.1 Information on toxicological effects:

Acute toxicity

Eye contact:

Direct eye contact with material or vapors may cause eye irritation.

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:

May cause allergic skin reaction.

Inhalation (Breathing):

Low vapor pressure makes this route of exposure unlikely.

Ingestion:

Ingestion may cause irritation of the gastrointestinal tract.

Toxicity to Animals:

Bisphenol A Diglycidyl Ether: LD₅₀ (oral rat) >15,000 mg/kg
 LD₅₀ (dermal rabbit) 23,000 mg/kg

Aspiration Hazard:

No aspiration hazard expected.

Chronic Exposure:

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.
Specific Target Organ Toxicity (STOT) Not available.
Toxicologically Synergistic Products: 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.

12. Ecological Information

12.1 Toxicity:

Aquatic Toxicity: May be toxic to aquatic organisms.
 Bisphenol A Diglycidyl Ether: LC₅₀ (96 hr.): 2 mg/l Oncorhynchus mykiss (rainbow trout)
 Bisphenol A Diglycidyl Ether: Semi-static test
 Bisphenol A Diglycidyl Ether: EC₅₀ (48 hr.): 1.8 mg/l Daphnia magna (invertebrate)
 Bisphenol A Diglycidyl Ether: Static test
 Bisphenol A Diglycidyl Ether: ErC₅₀ (72 hr.): 11 mg/l Fresh water algae (aquatic plants)
 Bisphenol A Diglycidyl Ether: Static test
 Bisphenol A Diglycidyl Ether: Chronic Toxicity Value: Daphnia magna (invertebrate), 21 d, number of offspring, NOEC: 0.3 mg/l
 Bisphenol A Diglycidyl Ether: Semi-static test

12.2 Persistence and degradability:

Bisphenol A Diglycidyl Ether: Based on stringent OECD test guidelines, this material cannot be considered readily biodegradable. Biodegradability depends on environmental conditions.
 Bisphenol A Diglycidyl Ether: OECD Biodegradation Test 302B
 Bisphenol A Diglycidyl Ether: 12% Biodegradation, 28 d exposure
 Bisphenol A Diglycidyl Ether: Theoretical Oxygen Demand
 Bisphenol A Diglycidyl Ether: 2.35 mg/mg

12.3 Bioaccumulation potential:

Bioconcentration potential is moderate.

12.4 Mobility in soil:

Potential for mobility in soil is low..

12.5 Results of PBT and vPvB Assessment:

This product is not, nor does it contain a substance that is a PBT or vPvB.

12.6 Other adverse effects:

None known.

13. Disposal Considerations

Do not dump into sewer, on ground or into any body of water. Dispose of product in accordance with National and Local Regulations.

14. Transport Information

DOT: Not Regulated

UN Number:	3077
UN Proper Shipping Name:	Environmentally hazardous substance, solid, N.O.S. (Bisphenol A)
Class and Subsidiary Risk:	9
Packing Group:	III
ICAO/IATA-DGR:	Not Regulated (See Special Provision A197)
IMDG:	Not Regulated (See IMDG Code 2.10.2.7)
ADR/RID:	9
Other information	For surface shipments within the United States: Not regulated.

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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> Yes	<u>Fire</u> No	<u>Pressure</u> No	<u>Reactive</u> No
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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.			

NFPA Ratings:	Health:	2
	Fire:	1
	Reactivity:	0

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.

California Proposition 65

WARNING: This product can expose you to 2-(phenoxyethyl)-oxirane which is known to the state of California to cause cancer, and 4,4'-(1-methylethylidene)bis-phenol which is known to the State of California to cause birth defects and/or other reproductive harm. For more information, go to www.p65warnings.ca.gov.

European Union

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list $\geq 0.1\%$ SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

Canada

All components are listed on the DSL inventory. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Australia

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

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:

OSHA = Occupational Safety and Health Administration

Product Name: PowerPatch® Putty Stick

Revision Date: March 4, 2022

CLP = Classification, Labeling and Packaging Regulation

STOT = Specific Target Organ Toxicity

LD₅₀ = Median Lethal Dose

DNEL = Derived No Effect Level

ACGIH = American Conference of Governmental Industrial Hygienists

TSCA = Toxic Substances Control Act (USA)

DSL = Domestic Substances List (Canada)

AICS = Australian Inventory of Chemical Substances

Mixture classification according to Regulation (EC) No 1272/2008:

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

Classification Procedure

Calculation method.

Calculation method.

Calculation method.

Revision Date: September 20, 2018

Revision Number: 8 NA

Supersedes: August 7, 2017

Other: Not Applicable

Indication of Changes: Section 8, 15 updated; added PPE pictograms and additional California Proposition 65 information. Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format)

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.

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name:
Type LoVoC™ Low VOC
Cleaning Wipe

Product ID numbers: LOVOC-1L

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Electrical cleaning

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

American Polywater Corporation

11222 - 60th Street North

Stillwater, MN 55082 USA

Tel: 1-651-430-2270

Email: sds@polywater.com

1.4 Emergency telephone numbers

INFOTRAC: 1-800-535-5053 (USA) 1-352-323-3500 (INT'L)

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Flam Liq 2	H226
Skin Irrit 2	H315
Skin Sens 1	H317
Eye Irrit 2	H319
STOT SE 3	H335

2.2 Label elements

Contains: Parachlorobenzotrifluoride, d-Limonene



Pictograms:

Signal word: Warning

Hazard Statements:

H226	Flammable liquid
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Precautionary Statements:

P210	Keep away from flames and hot surfaces. No smoking.
P261	Avoid breathing fumes.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353	IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water.
P333 + P313	If skin irritation or rash occurs get medical attention.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: get medical attention.
P370 + P378	In case of fire: Use water fog, foam, dry chemical or carbon dioxide for extinction.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local and national regulations.

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt. %</u>
Parachlorobenzotrifluoride	98-56-6	202-681-1	< 100%
d-Limonene	5989-27-5	227-813-5	< 10

4. First Aid Measures

4.1 Description of 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.
- 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. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.
- Ingestion (Swallowing):** Do not induce vomiting or give anything by mouth. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Carbon dioxide, water fog, dry chemical or foam.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition and by-products:

Burning may generate gases containing chlorine and/or gases containing fluorine. Smoke may be acrid and fumes irritating.

5.3 Advice for firefighters

Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Use water spray to cool fire exposed containers.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use only non-sparking tools to clean up the spill. For a spill in a confined space, provide mechanical ventilation to disperse or exhaust vapors. For emergency responders: use respiratory protection: half-face or full-face respirator with filter(s) for organic vapor for spills in a confined space. Work gloves that are resistant to aromatic hydrocarbons are recommended. Chemical goggles are recommended if splashes or contact with eyes is possible. For small spills: normal antistatic work clothes are usually adequate.

6.2 Environmental precautions:

Avoid release to the environment. Dyke the spill to prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods materials for containment and cleaning up:

Absorb spill with sand or absorbents. Collect as much of the spilled material as possible using non-sparking tools and transfer to a container. Seal the container. Remember, adding an absorbent material does not change the toxicity or flammability hazard.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. Electrostatic charge may build up during handling. Grounding of equipment is recommended. Avoid breathing vapors or spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store away from acids and oxidizing agents.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

Parachlorobenzotrifluoride (98-56-6)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
Manufacturer	25 ppm	--
USA OSHA, ACGIH	Not established	Not established
Alberta, Quebec, Yukon, British Columbia, Saskatchewan, Ontario*	Not established	Not established

D-Limonene (5989-27-5)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
USA ACGIH TWA	Not established	Not established
USA OSHA PEL	Not established	Not established
Alberta, Quebec, Yukon, British Columbia, Saskatchewan, Ontario*	Not established	Not established

** Manitoba, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island are all based on the current ACGIH TLVs. New Brunswick is based on an older version ACGIH. Nunavut and Northwest Territories are based heavily on current ACGIH TLVs.*

Component Name	Limit	Standard	Source/Note
Parachlorobenzotrifluoride	25 ppm	CEL	Manufacturer

8.2 Exposure controls

Respiratory protection:

Towelette limits solvent vapor exposure. 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. For limited use, PVC or Nitrile is acceptable. Chemically resistant gloves such as North Silver Shield® or Viton® may be used for longer exposure.

Eye protection:

None necessary. Wipe package eliminates splash hazard. Do not allow wipe/towel to directly contact 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 and Chemical

9.1 Information of basic physical and chemical properties

Appearance:	Clear, colorless liquid sharp odor.
Odor threshold:	Not available
pH:	Does not apply
Freezing point:	Not available.
Boiling point:	282°F / 139°C Initial
Flash point:	104°F (40°C), Closed Cup (PMCC)
Evaporation rate:	>0.1 (n-butyl acetate = 1)
Flammability (solid, gas):	Not applicable to liquids
Upper/lower flammability or explosive limits:	Upper:10.5 Lower: 0.9
Vapor pressure:	>5 mm Hg @ 20°C
Vapor density (Air = 1):	> 1.0
Specific gravity (H₂O = 1):	1.28
Solubility in water:	Minimal
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	>500 °C
Decomposition temperature:	Not available

9.2 Other Information

Volatiles (Weight %):	100%
VOC Content:	21 g/l (contains exempt compounds) 1.6% by weight (CARB, California Air Resource Board)

10. Stability and Reactivity

10.1 Reactivity:

See remaining headings in Section 10.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

None known.

10.4 Conditions to avoid:

Avoid heat, flame, and sparks.

10.5 Incompatible materials :

Strong oxidizing agents.

10.6 Hazardous decomposition products:

Carbon dioxide, carbon monoxide.

11. Toxicological Information

11.1 Information on toxicological effects:

Acute toxicity

Eye contact:

Direct eye contact may cause eye irritation. This irritation is minimal and expected to be transient.

Skin contact:

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.

Irritation and Sensitization Potential:

Product may be irritating to skin and eyes. It is not a sensitizer.

Inhalation (Breathing):

Concentrated petroleum solvent vapors may cause irritation of the nose and throat. Prolonged exposure to excessively high vapor concentrations can result in central nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue). Persons with impaired lung function may experience additional breathing difficulties due to the irritant properties of this material.

Ingestion:

Ingestion of large quantities may cause irritation of the digestive tract, nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).

Toxicity to Animals:

Parachlorobenzotrifluoride	LD ₅₀ (oral rat) >6800 mg/kg
	LD ₅₀ (dermal rabbit) >2700 mg/kg
	LC ₅₀ (inhl rat) 4479 ppm
Citrus Terpenes:	LD ₅₀ (oral rat) >5000 mg/kg
	LD ₅₀ (dermal rabbit) 5000 mg/kg
	RD ₅₀ 1000 ppm

Aspiration hazard

Not considered an aspiration hazard.

Chronic Exposure:

Reproductive Toxicity: Not available.

Mutagenicity: Not available.

Teratogenicity: Not available.

Specific Target Organ Toxicity (STOT) No end point data.

Toxicologically Synergistic Products: 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.

12. Ecological Information

12.1 Aquatic Toxicity:

Parachlorobenzotrifluoride LC₅₀ (96 hr.): 13.5 mg/l Rainbow trout (fish)
 LC₅₀ (96 hr.): 12.0 mg/l Bluegill sunfish (fish)
 LC₅₀ (48 hr.): 12.4 mg/l Water flea (Invertebrate)
 EC₅₀ (72 hr.): 500 mg/l Blue – green algae (Plant)

12.2 Persistence and degradability:

Expected to be biodegradable.

12.3 Bioaccumulation potential:

No information available

12.4 Mobility in soil:

No information available.

12.5 Results of PBT and vPvB Assessment:

This product is not, nor does it contain a substance that is a PBT or vPvB.

12.6 Other adverse effects:

None known.

13. Disposal Considerations

Dispose of product in accordance with National and Local Regulations.

14. Transport Information

US DOT Domestic Ground Transportation:

Type LOVOC is classified as a Combustible Liquid and is not regulated for Domestic ground transportation when shipped in non-bulk containers (< 400 liters/105.8 gallons per container). No special packaging, marking, labeling, and paperwork requirements apply.

ICAO/IATA-DGR:

UN 1993, Flammable Liquid, N.O.S., (Contains: Parachlorobenzotrifluoride, D'limonene), Class 3, III

IMDG:

UN 1993, Flammable Liquid, N.O.S., (Contains: Parachlorobenzotrifluoride, D'limonene), Class 3, III

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

USA Federal and State

All components are listed on the TSCA inventory.

Hazard Categories for SARA Section 311/312 Reporting

Acute
No

Chronic
Yes

Fire
Yes

Pressure
No

Reactive
No

Components

CERCLA/SARA Sec 302 Hazardous Substance RQ

EHS TPQ

SARA Sec. 313 Toxic Release

Components are not affected by these Superfund regulations.

NFPA Ratings:

Health: 1
 Fire: 2
 Reactivity: 0

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.

California Proposition 65

WARNING: This product can expose you to para-chlorobenzo trifluoride which is known to the state of California to cause cancer. For more information, go to www.p65warnings.ca.gov.

European Union

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list $\geq 0.1\%$ SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

Canada

All components are listed on the DSL inventory.
This product has been classified according to the hazard criteria of the CPR.

Australia

All components are listed on the AICS.
Hazardous according to criteria of NOHSC Australia. Product classified as harmful (Xn).

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:

OSHA = Occupational Safety and Health Administration
CLP = Classification, Labeling and Packaging Regulation
STOT = Specific Target Organ Toxicity
LD₅₀ = Median Lethal Dose
DNEL = Derived No Effect Level
ACGIH = American Conference of Governmental Industrial Hygienists
TSCA = Toxic Substances Control Act (USA)
DSL = Domestic Substances List (Canada)
AICS = Australian Inventory of Chemical Substances

Hazard Statements:

H226	Flammable liquid
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Revision Date:	March 4, 2022
Revision Number:	8
Supersedes:	September 3, 2020
Other:	Not Applicable
Indication of Changes:	No changes. Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format)

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.