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SAFETY DATA SHEET

SECTION 1 - Identification

1.1 Product Identifier

Product Name	• CARPOL® PES-305 Polyol
Synonyms	• Modified aromatic polyester polyol

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommended Use	• Component of Polyurethane
Restrictions on Use	• Industrial Use Only

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer	• Carpenter Co. 5016 Monument Ave. Richmond, Virginia 23230 (804) 233-0606

1.4 Emergency Telephone

Chemtrec	• (800) 424-9300 (24-hr number)

SECTION 2 - Hazards Identification

2.1 Classification of the Substance or Mixture

Classification in accordance with 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200):

Carcinogenicity Category 2 – H351
Specific Target Organ Toxicity Repeated Exposure (STOT-RE) Category 2 – H373

2.2 GHS Label Elements

Hazard Pictogram

Signal Word **Warning**

Hazard Statements H373 – May cause damage to organs (kidneys) through prolonged or repeated exposure (oral route of exposure)

Precautionary Statements

Prevention P260 **–** Do not breathe mist, vapors or spray.
P264 – Wash thoroughly after handling.

	P270 - Do not eat, drink or smoke when using this product.
Response	P304 – Get medical advice/attention if you feel unwell. P309+P311 – IF exposed or if you feel unwell: Call a POISON Center or doctor/physician. P301+P312+P330 - IF SWALLOWED: Rinse mouth. Call a physician if you feel unwell.
Storage/Disposal	P405 – Store locked up. P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Hazards Not Otherwise Classified

- May cause slight eye and skin irritation on direct contact.
- May cause gastrointestinal discomfort.
- Refer to Section 16 Other Information for HMIS and NFPA Codes.

SECTION 3 - Composition/Information on Ingredients

3.1 Substance

Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

3.2 Mixture

Name	Identifier	% (weight)
Diethylene glycol	CAS# 111-46-6	1-5
Ethylene glycol	CAS# 107-21-1	1-5
1,4 - Dioxane	CAS# 123-91-1	<0.2

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

SECTION 4 - First Aid Measures

4.1 Description of First Aid Measures

By route of inhalation	• Remove victim to fresh air.
By route of dermal contact	• Remove contaminated clothing and shoes. Wash thoroughly with soap and water. Seek medical attention if irritation develops.
By route of eye contact	• Flush with plenty of water for 15 minutes. Seek medical attention.
By route of ingestion	• If victim is conscious, rinse mouth give 1 to 2 glasses of water. Do not induce vomiting unless directed to do so by medical personnel.

4.2 Most Important Symptoms and Effects, Acute and Chronic

Refer to Section 11 Toxicological Information.

4.3 Indication of Immediate Medical Attention and Special Treatment If Needed

• Treat symptomatically and supportively.

SECTION 5 - Firefighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media	• Dry chemical, foam, carbon dioxide, water fog or fine spray.
Unsuitable Extinguishing Media	• Do not use direct water spray. May spread fire.

5.2 Special Hazards Arising From the Substance or Mixture

• May produce oxides of carbon and nitrogen, and have traces of aldehydes, ketones, and organic acids on combustion.

5.3 Special Protective Actions for Firefighters

• Responding personnel must wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing.

SECTION 6 - Accidental Release Measures

6.1. Personal Precautions, Protective Equipment, and Emergency Procedures

• Isolate the area. Keep unauthorized people away. Do not touch or walk through the spilled material. Spilled material may be slippery. Ensure adequate ventilation in enclosed area. Eliminate all ignition sources. Use protective equipment appropriate for the size of the spill.

6.2 Environmental Precautions

• Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

6.3 Methods and Materials for Containment and Clean Up

Methods	• Stop leak, dam spill, and transfer liquid into a suitable container. • Collect residue with absorbent and transfer into a suitable container for proper disposal.
Materials	• For large spills, responding personnel must use supplied-air positive pressure breathing apparatus. • Inert absorbent (sand, earth or similar).

6.4 Reference to Other Sections

• Refer to Section 8 for exposure control and personal protective equipment information.
• Refer to Section 12 for ecological information.

SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling

• Keep containers tightly closed when not in use.
• Do not eat, drink, or smoke in working area.
• Avoid contact with eyes and minimize contact with skin.
• Use good safety and industrial hygiene practices.
• Wash thoroughly after handling.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Storage	• Store materials in a cool, dry place. Store locked up. Do not transport with oxidizers.
Incompatibilities	• Oxidizing materials, acids, and isocyanates.

SECTION 8: Exposure Controls/ Personal Protection

8.1 Control Parameters

Exposure Limits/Guidelines

	OSHA PEL(ppm)	ACGIH TLV (ppm)
Ethylene Glycol	Not available (NA)	NA
Diethylene Glycol	NA	NA
1,4-Dioxane	100 ppm TWA skin	20 ppm TWA skin

8.2 Exposure Controls

Engineering Controls	• Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.
Eye/Face Protection	• Safety glasses with side shields. Chemical goggles if there is a possibility of splashing.
Respiratory Protection	• None required under normal use. If product is heated or sprayed, appropriate respiratory protection may be needed.
Skin Protection	• Wear suitable working clothes and shoes. • As with any chemical, skin contact should be minimized with good work practices. Wear chemical resistant gloves appropriate for the intended use. Consult glove manufacturers for assistance in choosing appropriate gloves.
Ingestion	• Do not eat, drink or smoke in work area. Wash hands before eating or smoking.
Additional Protection Measures	• Eyewash station and safety shower.

SECTION 9: Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	• Liquid	Odor	• Low odor
Appearance /Color	• Clear	Odor Threshold	• No data available
General Properties			
Boiling Point	• No data available	Melting Point	• No data available
Decomposition Temperature	• No data available	pH	• No data available
Density (at 25°C)	• No data available	Water Solubility	• Low
Solvent Solubility	• No data available	Viscosity (at 25°C)	• No data available
Explosive Properties	• No data available	Specific Gravity/Relative Density	• 1.24 (H_2O=1)
Volatility			
Vapor Pressure	• No data available	Vapor Density	• No data available
Evaporation Rate	• No data available	VOC (Vol.)	• No data available
Volatiles (Vol.)	• No data available		
Flammability			
Flash Point	• >200°F (PMCC)	LEL	• No data available
UEL	• No data available	Flammability (solid, gas)	• No data available
Auto-ignition Temperature	• No data available		
Environmental			
Octanol/Water Partition Coefficient	• No data available		

9.2. Other Information

No additional information available

SECTION 10: Stability and Reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability

Stable under normal temperatures and pressures.

10.3 Possibility of Hazardous Reactions

No data available.

10.4 Conditions to Avoid

Elevated temperatures.

10.5 Incompatible Materials

Oxidizing materials, strong acids, and isocyanates.

10.6 Hazardous Decomposition Products

No data available.

SECTION 11: Toxicological Information

11.1 Information on Toxicological Effects

Main routes of exposure include eye and skin exposure. Inhalation of toxic concentrations is unlikely unless sprayed or heated. Ingestion of toxic amounts in an industrial setting is unlikely.

Acute Toxicity (based on similar materials)

Chemical	LD50 oral rat	LD50 dermal rabbit	LC50 inhalation rat
Polyester polyol	> 2,000 mg/kg	No data available	No data available
Diethylene glycol	12,565 mg/kg	11,890 mg/kg	No data available
Ethylene glycol	4,700 mg/kg	10,626 mg/kg	No data available
1,4-Dioxane	4,200 mg/kg	7,858 mg/kg	46,000 mg/m3, 2h

• Ethylene Glycol is listed as Acute Oral Toxicity Category 4 by the manufacturer.

Skin Corrosion/Irritation

Based on available information, skin corrosion/irritation is not expected under normal conditions of use.

Serious Eye Damage/Irritation

Based on available information, skin corrosion/irritation is not expected under normal conditions of use.

Prolonged direct eye contact may cause eye irritation.

Respiratory or Skin Sensitization

• Based on available information, sensitization criteria are not met.

Germ Cell Mutagenicity

• Available studies have not indicated this material to be a mutagen.

Carcinogenicity

• Carcinogenicity Category 2 – Suspected of causing cancer.
• 1,4-Dioxane - IARC 2B Possibly carcinogenic to humans.

Reproductive Toxicity

• Available studies have not indicated this material to be a reproductive toxin.

Specific Target Organ Toxicity (single exposure)

• Not classified

Specific Target Organ Toxicity (repeated exposure)

• STOT-RE: May cause damage to organs (kidney) through prolonged or repeated exposure (oral route of exposure). Classification based on Diethylene glycol.

Aspiration Hazard

• No data available

11.2 Potential Health Effects

Inhalation

Acute	• Exposure to toxic amounts unlikely unless heated or sprayed.
Chronic	• None known.

Skin

Acute	• Prolonged contact may cause irritation.
Chronic	• None known.

Eye

Acute	• Direct contact with eyes may cause irritation.
Chronic	• None known.

Ingestion

Acute	• Small amounts swallowed may cause gastrointestinal discomfort. Large amounts can cause kidney damage.
Chronic	• Prolonged repeated exposure may cause central nervous system effects and kidney damage. Symptoms include nausea, vomiting abdominal pain, dizziness.

SECTION 12: Ecological Information

12.1 Ecotoxicity

Aquatic plants: EC0 (72 h) >32 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201)

12.2 Persistence and Degradability

No data available

12.3 Bioaccumulative Potential

No data available

12.4 Mobility in Soil

No data available

12.5 Other Adverse Effects

No data available

SECTION 13: Disposal Considerations

13.1 Waste Disposal Method

Product Waste

• Do not dump into any sewers, on the ground, or into any body of water.

• All disposal methods must be in compliance with Federal, State/Provincial, and local regulations.

Packaging Waste

• Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport Information

U.S. DOT/IATA/IMDG

Not regulated as hazardous for shipment under 50,000 pounds.

SECTION 15: Regulatory Information

15.1 Regulatory Status

CERCLA Hazardous Substances (40 CFR 302):

Ethylene glycol (CAS# 107-21-1)	RQ = 5000 lbs
1,4-Dioxane (CAS# 123-91-1)	RQ = 100 lbs

SARA 311/312:

Ethylene glycol (CAS# 107-21-1)	- Chronic health hazard.
1,4-Dioxane (CAS# 123-91-1)	- Acute and Chronic health hazard. Fire hazard.

SARA 313:

Ethylene glycol	CAS# 107-21-1
1,4-Dioxane	CAS# 123-91-1

15.2 US State Regulations

⚠**WARNING:** This product can expose you to chemicals including 1,4-Dioxane, which is known to the State of California to cause cancer. For more information go to www.P65Warning.ca.gov

15.3 Canadian Regulations

DSL: At least one component is not listed on the DSL.

15.4 International Inventories*

United States: All components of this product are listed on the TSCA inventory.

*=Although a chemical may be listed on a country's inventory, it may not indicate a hazard or regulatory control for use.

SECTION 16: Other Information

16.1 HMIS AND NFPA RATINGS

HMIS Classification	**NFPA Ratings**
Health: 1*	Health: 1
Flammability: 1	Flammability: 1
Reactivity: 0	Instability: 0
	Special: None

16.2 EU CLP Relevant Phrases

Not available

16.3 Preparation By

I.H. Department

16.4 Preparation Date

September 4, 2013

16.5 Last Revision Date

August 9, 2018 - Section 15

16.6 Disclaimer/Statement of Liability

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