PE tetraoleate

PE tetraoleate is listed in the Tetraesters / Dioleates / Complex Esters range for advanced industrial ester and formulation enquiries.

DOCUMENT TYPE	Safety Data Sheet (SDS)
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ADTEC 139 PE TETRAOLEATE

Date of compilation: 12/23/2025 Version: 1

SECTION 1: IDENTIFICATION

1.1 Product identifier:

ADTEC 139 PE TETRAOLEATE
Pentaerythritol tetraoleate

CAS: 19321-40-5

Other means of identification:

Non-applicable

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses (Industrial user):
- Not defined

Uses advised against:
- All uses not specified in this section or in section 7.3

1.3 Name, U.S. address, and U.S. telephone number of the chemical manufacturer, importer, or other responsible party:

POLYRHEO USA INC
2925 East Ontario street , Philadelphia
19134 2925 E Ontario St Philadelphia, PA - Pennsylvania - United States
Phone: 856) 533 3000, (856) 533 3030
sales@polyrheo.com

1.4 Emergency phone number: CHEMTREC: 1-800-424-9300 (within the U.S.)
+1 703-527-3887 (Washington DC)

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture:

NFPA:

Health Hazards: 0
Flammability Hazards: 1
Instability Hazards: 0
Special Hazards: Non-applicable

29 CFR 1910.1200:

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

2.2 Label elements:

NFPA:



29 CFR 1910.1200:

None

2.3 Hazards not otherwise classified (HNOC):

Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Not defined

Remaining components are non-hazardous and/or present at amounts below reportable limits. The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.Therefore, in accordance with Appendix D to § 1910.1200, the product contains:

- CONTINUED ON NEXT PAGE -

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Chemical name/Classification	Concentration
CAS: 19321-40-5	**Pentaerythritol tetraoleate**	**100 %**

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

3.2 Mixtures:

Non-applicable

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary measures:

Consult a doctor in case of discomfort with this Safety data Sheet.

By inhalation:

In case of symptoms, move the person affected into fresh air.

By skin contact:

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,…), seek medical advice with this Safety Data Sheet

By eye contact:

Rinse with water until the product has been eliminated. In case of problems, consult a doctor with the SDS of this product.

By ingestion/aspiration:

In case of consumption in large quantities, it is recommended to seek medical assistance.

4.2 Most important symptoms/effects, acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Non-applicable

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Specific hazards arising from the chemical:

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

5.3 Special protective equipment and precautions for fire-fighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and Self Contained Breathing Apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Only properly trained personnel should be involved in firefighting. Evacuate nonessential personnel from the fire area. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

- CONTINUED ON NEXT PAGE -

SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and materials for containment and cleaning up:

For accidental releases in excess of reportables quantities (RQ) (Table 302.4), refer to 40 CFR 302 for detailed instructions concerning reporting requirements and notify the National Response Center (800) 424-8802.
Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.
Spillages in water or sea:
Small spillages:
Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.
Large spillages:
If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

It is recommended to transfer at a slow speed to avoid the creation of electrostatic charges that could affect flammable products. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is not necessary to take special measures to prevent environmental risks. For more information see subsection 6.2

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Store in a cool, dry, well-ventilated location

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be assessed in the workplace:

There are no applicable occupational exposure limits for the substances contained in the product

8.2 Appropriate engineering controls:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protection Equipment. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation, the information on clothing performance must be combined with professional judgment, and a clear understanding of the clothing application, to provide the best protection to the worker. All chemical protective clothing use must be based on a hazard assessment to determine the risks for exposure to chemicals and other hazards. Conduct hazard assessments in accordance with 29 CFR 1910.132.

B.- Respiratory protection

If the working conditions and/or safety measures adopted do not allow keeping the airborne concentration of the product below the exposure limits (if any) or at acceptable levels (if no exposure limits exist), suitable respiratory protection equipment chosen by a qualified professional should be used.

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	Protective gloves against minor risks	Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional /industrial users, we recommend using chemical protection gloves. Use gloves in accordance with manufacturer´s use limitations and OSHA standard 1910.138 (29CFR)

D.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing. Use this PPE in accordance with manufacturer´s use limitations and OSHA standard 1910.133 (29CFR)

E.- Bodily protection

Pictogram	PPE	Remarks
	Work clothing	Replace before any evidence of deterioration.
	Anti-slip work shoes	Replace before any evidence of deterioration.

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

It is not necessary to take additional emergency measures.

Environmental exposure controls:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

40 CFR Part 59 (VOC):

V.O.C.(weight-percent): 0 % weight

V.O.C. at 68 ºF: 0 kg/m³ (0 g/L)

California Air Resources Board (CARB) - VOC Regulatory:

V.O.C.(weight-percent): 0 % weight

V.O.C. at 68 ºF: 0 kg/m³ (0 g/L)

South Coast Air Quality Management District (AQMD) - VOC Regulatory:

V.O.C.(weight-percent): 0 % weight

V.O.C. at 68 ºF: 0 kg/m³ (0 g/L)

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Ozone Transport Commission (OTC) Rules - VOC Regulatory:

V.O.C.(weight-percent):	0 % weight
V.O.C. at 68 ºF:	0 kg/m³ (0 g/L)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:

Physical state at 68 ºF:	Liquid
Appearance:	Non-applicable *
Color:	Characteristic
Odor:	Non-applicable *
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 68 ºF:	Non-applicable *
Vapour pressure at 122 ºF:	<300000 Pa (300 kPa)
Evaporation rate at 68 ºF:	Non-applicable *

Product description:

Density at 68 ºF:	930 kg/m³
Relative density at 68 ºF:	0.93
Dynamic viscosity at 68 ºF:	Non-applicable *
Kinematic viscosity at 68 ºF:	Non-applicable *
Kinematic viscosity at 104 ºF:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 68 ºF:	Non-applicable *
Partition coefficient n-octanol/water 68 ºF:	Non-applicable *
Solubility in water at 68 ºF:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	-4 ºF

Flammability:

Flash Point:	356 ºF
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	617 ºF
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

Particle characteristics:

Median equivalent diameter:	Non-applicable *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

*Non-applicable due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *
Other safety characteristics:	
Surface tension at 68 ºF:	Non-applicable *
Refraction index:	Non-applicable *
Total lead:	0 ppm

*Non-applicable due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Not applicable	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO_2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

LD50 oral > 5000 mg/kg (rat)

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met
- Corrosivity/Irritability: Based on available data, the classification criteria are not met

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met
- Corrosivity/Irritability: Based on available data, the classification criteria are not met

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met
- Contact with the eyes: Based on available data, the classification criteria are not met

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Carcinogenicity: Based on available data, the classification criteria are not met
  IARC: Non-applicable
- Mutagenicity: Based on available data, the classification criteria are not met
- Reproductive toxicity: Based on available data, the classification criteria are not met

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met
- Skin: Based on available data, the classification criteria are not met

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met
- Skin: Based on available data, the classification criteria are not met

H- Aspiration hazard:

Based on available data, the classification criteria are not met

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Pentaerythritol tetraoleate CAS: 19321-40-5	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation vapour	>20 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

Based on available data, the classification criteria are not met

12.1 Ecotoxicity (aquatic and terrestrial, where available):

Non-applicable

12.2 Persistence and degradability:

Non-applicable

12.3 Bioaccumulative potential:

Non-applicable

12.4 Mobility in soil:

Non-applicable

12.5 Results of PBT and vPvB assessment:

Non-applicable

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

IT IS THE RESPONSIBILITY OF THE WASTE GENERATOR TO EVALUATE WHETHER HIS WASTES ARE HAZARDOUS BY CHARACTERISTICS OR LISTING.

Waste management (disposal and evaluation):

Follow RCRA framework and EPA regulation for to ensure that hazardous waste is managed safely and properly.Waste should not be disposed of to drains. Remind, It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristics or listing.See section 6 for further information about Accidental release measures.

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)

Regulations related to waste management:

Legislation related to waste management:

40 CFR Solid Wastes - Part 239 through 282.
State regulatory requirements for generators may be more stringent than those in the federal program. Be sure to check the state´s policies.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to 49 CFR on the Transport of Dangerous Goods:

14.1	**UN number:**	Non-applicable
14.2	**UN proper shipping name:**	Non-applicable
14.3	**Transport hazard class(es):**	Non-applicable
	Labels:	Non-applicable
14.4	**Packing group, if applicable:**	Non-applicable
14.5	**Marine pollutant:**	No
14.6	**Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**	
	Physico-Chemical properties:	see section 9
14.7	**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):**	Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 42-24:

14.1	**UN number:**	Non-applicable
14.2	**UN proper shipping name:**	Non-applicable
14.3	**Transport hazard class(es):**	Non-applicable
	Labels:	Non-applicable
14.4	**Packing group, if applicable:**	Non-applicable
14.5	**Marine pollutant:**	No
14.6	**Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**	
	Special regulations:	Non-applicable
	EmS Codes:	
	Physico-Chemical properties:	see section 9
	Limited quantities:	Non-applicable
	Segregation group:	Non-applicable
14.7	**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):**	Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2025:

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SECTION 14: TRANSPORT INFORMATION (continued)

14.1	**UN number:**	Non-applicable
14.2	**UN proper shipping name:**	Non-applicable
14.3	**Transport hazard class(es):**	Non-applicable
	Labels:	Non-applicable
14.4	**Packing group, if applicable:**	Non-applicable
14.5	**Marine pollutant:**	No
14.6	**Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**	
	Physico-Chemical properties:	see section 9
14.7	**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):**	Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

- CALIFORNIA LABOR CODE - The Hazardous Substances List: Non-applicable
- California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Birth defects or other reproductive harm: Non-applicable
- California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Cancer: Non-applicable
- CANADA-Domestic Substances List (DSL): *Pentaerythritol tetraoleate (19321-40-5)*
- CANADA-Non-Domestic Substances List (NDSL): Non-applicable
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantities: Non-applicable
- Hazardous Air Pollutants (Clean Air Act): Non-applicable
- Massachusetts RTK - Substance List: Non-applicable
- Minnesota - Hazardous substances ERTK: Non-applicable
- New Jersey Worker and Community Right-to-Know Act: Non-applicable
- New York RTK - Substance list: Non-applicable
- NTP (National Toxicology Program): Non-applicable
- OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): Non-applicable
- Pennsylvania Worker and Community Right-to-Know Law: Non-applicable
- Protective Action Criteria (PAC) with AEGLs, ERPGs, & TEELs: Non-applicable
- Rhode Island - Hazardous substances RTK: Non-applicable
- SB-258 Cleaning Product Right to Know Act : Non-applicable
- The Toxic Substances Control Act (TSCA) (USA, Puerto Rico): *Pentaerythritol tetraoleate (19321-40-5)*
- Toxic chemical release reporting under EPCRA section 313 (40 CFR Part 372): Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information provided in this safety data sheet as a foundation for conducting workplace-specific risk assessments. These assessments will help establish the appropriate risk prevention measures for handling, using, storing, and disposing of this product.

Other legislation:

Take into consideration other applicable federal, state, and local laws and local regulations.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Appendix d to §1910.1200 - Safety data sheets

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

29 CFR 1910.1200:

Non-applicable

Advice related to training:

According to 29 CFR 1910. 1200, training on chemical hazards is necessary for employees using this product. This training will facilitate their understanding and interpretation of the safety data sheet, as well as the product label.

Principal bibliographical sources:

Occupational Safety & Health Administration (OSHA).

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SECTION 16: OTHER INFORMATION (continued)

Abbreviations and acronyms:

IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
CL50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol-water partition coefficient
Koc: Partition coefficient of organic carbon
IARC: International Agency for Research on Cancer

NFPA:

Health Hazards: 0
Flammability Hazards: 1
Instability Hazards: 0
Special Hazards: Non-applicable



Date of compilation: 12/23/2025

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END OF SAFETY DATA SHEET