

SAFETY DATA SHEET

1. Identification

Product identifier: Octyl Phenol Ethoxylate

Other means of identification

Product No.: 4425, H282, X198

Recommended use and restriction on use

Recommended use: Not available.

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:
Contact Person: Environmental Health & Safety
e-mail: info@avantormaterials.com

Emergency telephone number:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Oral)	Category 4
Serious Eye Damage/Eye Irritation	Category 1

Environmental Hazards

Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 2

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Harmful if swallowed.
Causes serious eye damage.
Toxic to aquatic life with long lasting effects.

Precautionary Statement

Prevention: Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Collect spillage.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
POLYETHYLENE GLYCOL OCTYLPHENYL ETHER		9036-19-5	97 - 100%
POLYETHYLENE GLYCOL		25322-68-3	<3%
DIOXANE		123-91-1	<0.0055%
ETHYLENE OXIDE		75-21-8	<0.0010%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Rinse mouth thoroughly. Call a POISON CENTER or doctor/physician if you feel unwell.

Inhalation: Move to fresh air. Get medical attention if symptoms persist.

Skin Contact: Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

Symptoms: Harmful if swallowed. Causes serious eye damage.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Keep unauthorized personnel away. Use personal protective equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.

Methods and material for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Prevent entry into waterways, sewer, basements or confined areas. Stop leak if you can do so without risk. Inform authorities if large amounts are involved.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Do not contaminate water sources or sewer.

7. Handling and storage

Precautions for safe handling: Use personal protective equipment as required. Wash thoroughly after handling. Avoid contact with eyes. Do not breathe mist or vapor. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. See Section 8 of the MSDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Store in a cool and well-ventilated place. Store in a dry place. Store away from incompatible materials.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
DIOXANE	TWA	20 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceil_Time	1 ppm 3.6 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	100 ppm 360 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
ETHYLENE OXIDE	TWA	25 ppm 90 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	0.1 ppm 0.18 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceil_Time	5 ppm 9 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	TWA	1 ppm	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
	STEL	5 ppm	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
	OSHA_ACT	0.5 ppm	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
	TWA	1 ppm	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	5 ppm	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

- General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
- Eye/face protection:** Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.
- Skin Protection**
- Hand Protection:** Wear protective gloves.
- Other:** Wear suitable protective clothing.
- Respiratory Protection:** In case of inadequate ventilation use suitable respirator.
- Hygiene measures:** Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Avoid contact with eyes.

9. Physical and chemical properties

Appearance

- Physical state:** Liquid
- Form:** Liquid
- Color:** Pale yellow

Odor:	Mild
Odor threshold:	No data available.
pH:	7 5% aqueous solution
Melting point/freezing point:	6 °C
Initial boiling point and boiling range:	> 200 °C
Flash Point:	251 °C
Evaporation rate:	< 0.01 n-butyl acetate=1
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	< 0.01 kPa (20 °C)
Vapor density:	> 1.0 AIR=1
Relative density:	1.07
Solubility(ies)	
Solubility in water:	Miscible with water.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat. Contact with incompatible materials.
Incompatible Materials:	Strong acids. Strong oxidizing agents. Strong bases. Copper. Copper alloys.
Hazardous Decomposition Products:	Thermal decomposition may release oxides of carbon.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Harmful if swallowed.
Inhalation:	May cause irritation to the respiratory system.
Skin Contact:	May cause irritation.
Eye contact:	Causes serious eye damage.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	No data available.
Specified substance(s): DIOXANE	LD 50 (Rabbit): 2,000 mg/kg
Specified substance(s): ETHYLENE OXIDE	LD 50 (Mouse): 280 mg/kg LD 50 (Rat): 72 mg/kg

Dermal

Product:	No data available.
Specified substance(s): DIOXANE	LD 50 (Rabbit): 7,600 mg/kg LD 50 (Rat): > 8,300 mg/kg

Inhalation

Product:	No data available.
Specified substance(s): DIOXANE	LC 50 (Rat, 2 h): 46 mg/l LC 50 (Mouse, 2 h): 37 mg/l
Specified substance(s): ETHYLENE OXIDE	LC 50 (Rat, 4 h): 1.44 mg/l LC 50 (Mouse, 4 h): 1.505 mg/l

Repeated Dose Toxicity

Product:	No data available.
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Skin Corrosion/Irritation

Product:	May cause skin irritation.
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Serious Eye Damage/Eye Irritation

Product:	Causes serious eye damage.
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Respiratory or Skin Sensitization

Product:	Not a skin sensitizer.
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Carcinogenicity

Product:	This substance has no evidence of carcinogenic properties.
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IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product:	No mutagenic components identified
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In vivo

Product:	No mutagenic components identified
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Reproductive Toxicity

Product:	No components toxic to reproduction
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Specific Target Organ Toxicity - Single Exposure

Product: None known.

Specific Target Organ Toxicity - Repeated Exposure

Product: None known.

Aspiration Hazard

Product: Not classified

Other Effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

POLYETHYLENE LC 50 (Rainbow trout,donaldson trout (*Oncorhynchus mykiss*), 96 h): 7.2 mg/l Mortality
GLYCOL
OCTYLPHENYL ETHER

POLYETHYLENE LC 50 (Atlantic salmon (*Salmo salar*), 24 h): > 1,000 mg/l Mortality
GLYCOL LC 50 (Medaka, high-eyes (*Oryzias latipes*), 24 h): > 1,000 mg/l Mortality
LC 50 (Goldfish (*Carassius auratus*), 24 h): > 5,000 mg/l Mortality
LC 50 (Atlantic salmon (*Salmo salar*), 48 h): > 1,000 mg/l Mortality
LC 50 (Medaka, high-eyes (*Oryzias latipes*), 48 h): > 1,000 mg/l Mortality

DIOXANE LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 9,851 mg/l Mortality
LC 50 (Carp (*Leuciscus idus melanotus*), 48 h): 8,450 mg/l Mortality
EC 50 (Bluegill (*Lepomis macrochirus*), 48 h): 3,494 - 5,215 mg/l Mortality

ETHYLENE OXIDE LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 73 - 96 mg/l Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

POLYETHYLENE LC 50 (Water flea (*Daphnia magna*), 48 h): 7.5 - 9.8 mg/l Mortality
GLYCOL LC 50 (Spionid polychaete (*Scolecopsis fuliginosa*), 96 h): 13.43 mg/l Mortality
OCTYLPHENYL ETHER

DIOXANE LC 50 (Water flea (*Daphnia magna*), 24 h): 4,700 mg/l Mortality
LC 50 (Scud (*Gammarus pseudolimnaeus*), 96 h): 1,800 - 2,872 mg/l Mortality

ETHYLENE OXIDE LC 50 (Brine shrimp (*Artemia* sp.), 48 h): 1,000 mg/l Mortality
LC 50 (Water flea (*Daphnia magna*), 48 h): 83 - 179 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability**Biodegradation****Product:** There are no data on the degradability of this product.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative Potential****Bioconcentration Factor (BCF)****Product:** No data available on bioaccumulation.**Partition Coefficient n-octanol / water (log Kow)****Product:** No data available.**Specified substance(s):**

DIOXANE Log Kow: -0.27

ETHYLENE OXIDE Log Kow: -0.30

Mobility in Soil: The product is water soluble and may spread in water systems.**Other Adverse Effects:** Toxic to aquatic life with long lasting effects.**13. Disposal considerations****Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.**14. Transport information****DOT**

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

15. Regulatory information**US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

DIOXANE Reportable quantity: 100 lbs.

ETHYLENE OXIDE Reportable quantity: 10 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely Hazardous Substance

Chemical Identity	RQ	Threshold Planning Quantity
ETHYLENE OXIDE	10 lbs.	1000 lbs.

SARA 304 Emergency Release Notification

Chemical Identity	RQ
DIOXANE	100 lbs.
ETHYLENE OXIDE	10 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
POLYETHYLENE GLYCOL OCTYLPHENYL ETHER	500 lbs
DIOXANE	500 lbs

SARA 313 (TRI Reporting)

Chemical Identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
DIOXANE	10000 lbs	25000 lbs.
ETHYLENE OXIDE	10000 lbs	25000 lbs.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

DIOXANE	Carcinogenic.
ETHYLENE OXIDE	Carcinogenic.
ETHYLENE OXIDE	Female reproductive toxin.
ETHYLENE OXIDE	Male reproductive toxin.
ETHYLENE OXIDE	Developmental toxin.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

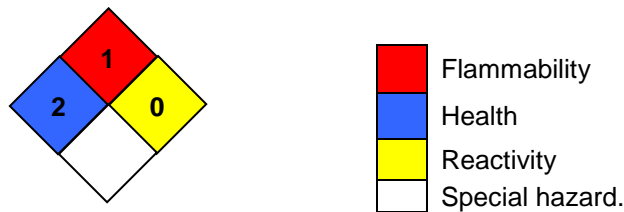
No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

US TSCA Inventory:	On or in compliance with the inventory
Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue Date:	11-26-2014
Revision Date:	No data available.
Version #:	1.0
Further Information:	No data available.

Disclaimer:

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