



SAFETY DATA SHEET

Revision Date: 11/07/2016

Version 1.2

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name

Optiphen™ PLUS preservative

™ Trademark, Ashland or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Preservative

Details of the supplier of the safety data sheet Chemistry Connection 253 Sturgis Rd Conway, AR 72034 USA (501) 470-9689 contact@thechemistryconnection.com	Emergency telephone number During business hours (8am - 5pm Mon-Fri) 888-583-7738 Emergency telephone number After business hours CHEMTREC 800-424-9300
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification Eye

irritation

Category 2A

GHS label elements

Hazard pictograms



Signal Word

Warning

Hazard Statements

Causes serious eye irritation.

Precautionary Statements

Prevention:

Wash skin thoroughly after handling.

Wear eye protection/ face protection.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/ attention.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS No.	Classification	Concentration (%)
2-PHENOXYETHANOL	122-99-6	Acute Tox. 4; H302 Eye Irrit. 2A; H319	52.2582
1,2-OCTANEDIOL	1117-86-8	Eye Irrit. 2A; H319	41.7398
SORBIC ACID	110-44-1	Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335	6.002

SECTION 4. FIRST AID MEASURES

General advice	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	If breathed in, move person into fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use.
In case of eye contact	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye.
If swallowed	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) pain in the abdomen and lower back acute kidney failure (sudden slowing or stopping of urine production) Causes serious eye irritation.
Notes to physician	No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO ₂) Dry chemical
Unsuitable extinguishing media	High volume water jet
Specific hazards during firefighting	If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	Carbon dioxide and carbon monoxide
Specific extinguishing methods	Product is compatible with standard fire-fighting agents.
Further information	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.
Other information	Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	Do not breathe vapours/dust. Do not smoke. Container hazardous when empty. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area.
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For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards. Protect from frost.
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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.
Hazardous components without workplace control parameters

Engineering measures

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Hand protection

Remarks

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures

Wash hands before breaks and at the end of workday. When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

liquid

Colour

light yellow

Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Boiling point/boiling range	No data available
Flash point	255 °F / 124 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Relative vapour density	No data available
Relative density	No data available
Density	1.014 - 1.024 g/cm ³
Solubility(ies)	
Water solubility	No data available
Solubility in other solvents	No data available
Partition coefficient:n-octanol/water	No data available
Thermal decomposition	No data available
Viscosity	
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No decomposition if stored and applied as directed.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Product will not undergo hazardous polymerization.
Conditions to avoid	excessive heat Do not allow evaporation to dryness. Exposure to light.
Incompatible materials	Strong bases Strong oxidizing agents
Hazardous decomposition products	carbon dioxide and carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:

2-PHENOXYETHANOL:

Acute oral toxicity

LO 50 (Rat): 1,850 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity

Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

1,2-OCTANEDIOL:

Acute oral toxicity

LO 50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Assessment: No adverse effect has been observed in acute oral toxicity tests.

Acute inhalation toxicity

LC 50 (Rat): > 7.015 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: Information given is based on data obtained from similar substances.

SORBIC ACID:

Acute oral toxicity

LO 50 (Rat): 7.36 g/kg

Acute inhalation toxicity

LC 50 (Rat): > 38.1 mg/m³
Exposure time: 6 h
Test atmosphere: dust/mist

Acute dermal toxicity

LO 50 (Rabbit): > 7,940 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

2-PHENOXYETHANOL:

Species: Rabbit

Result: No skin irritation

1,2-OCTANEDIOL:

Species: Rabbit

Result: No skin irritation

SORBIC ACID:

Result: Irritating to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

Components:

2-PHENOXYETHANOL:

Species: Rabbit Result:

Irritating to eyes.

1,2-OCTANEDIOL:

Result: Irritating to eyes.

SORBIC ACID:

Species: Rabbit

Result: Irritating to eyes.

Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:

2-PHENOXYETHANOL:

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

1,2-OCTANEDIOL:

Test Type: Local lymph node assay

Species: Mouse

Assessment: Did not cause sensitisation on laboratory animals.

Method: OECD Test Guideline 429

Result: Did not cause sensitisation on laboratory animals.

GLP: yes

Germ cell mutagenicity

Not classified based on available information.

Components:

2-PHENOXYETHANOL:

Genotoxicity in vitro

Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

1,2-OCTANEDIOL:

Genotoxicity in vitro

Test Type: Ames test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

GLP: yes

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

SORBIC ACID:
Exposure routes: Inhalation
Target Organs: Respiratory Tract Assessment:
May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

2-PHENOXYETHANOL:

Toxicity to fish	LC 50 (Fathead minnow (<i>Pimephales promelas</i>)): 337 - 352 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	EC50 (<i>Daphnia magna</i> (Water flea)): > 500 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae	NOEC (<i>Desmodesmus subspicatus</i> (green algae)): > 500 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test
Toxicity to fish (Chronic toxicity)	NOEC (<i>Pimephales promelas</i> (fathead minnow)): 23 mg/l Exposure time: 34 d Test Type: flow-through test Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC (<i>Daphnia</i> (water flea)): 9.43 mg/l Exposure time: 21 d End point: Reproduction Test Test Type: semi-static test Method: OECD Test Guideline 211

1,2-OCTANEDIOL: Toxicity to fish	LC 50 (Dania rerio (zebra fish)): > 2.2 - < 22.2 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	EC 50 (Water flea (Daphnia magna)): 176 mg/l Exposure time: 48 h Test Type: semi-static test Method: OECD Test Guideline 202
Toxicity to algae	EC 50 (Pseudokirchneriella subcapitata (green algae)): 35 mg/l End point: Growth inhibition Exposure time: 72 h Method: OECD Test Guideline 201 GLP: yes
SORBIC ACID: Toxicity to fish	LC50 (Oryzias latipes (Orange-red killifish)): 75 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 70 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae	EcC50 (Desmodesmus subspicatus (green algae)): 24.1 mg/l End point: Biomass Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
	ErC50 (Desmodesmus subspicatus (green algae)): 41.9 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC (Water flea (Daphnia magna)): 50 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211 GLP: yes
No data available	
Persistence and degradability	
Components:	
2-PHENOXYETHANOL: Biodegradability	Result: Readily biodegradable Biodegradation: 99 % Exposure time: 28 d Method: OECD Test Guideline 301 F
1,2-OCTANEDIOL: Biodegradability	Result: Readily biodegradable

Biodegradation: 75 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
Remarks: Readily biodegradable

SORBIC ACID:
Biodegradability

Result: Readily biodegradable
Biodegradation: 74.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

No data available

Bioaccumulative potential

Components:

2-PHENOXYETHANOL:

Partition coefficient: n-octanol/water

log Pow: 1.16

1,2-OCTANEDIOL:

Partition coefficient: n-octanol/water

log Pow: 1.0

SORBIC ACID:

Partition coefficient: n-octanol/water

log Pow:
1.33 pH: 2.5

No data available

Mobility in soil

Components:

No data available

Other adverse

effects No data

available **Product:**

Additional ecological information

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice

The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging

Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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MX_DG

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

TDG INWT_C

Not dangerous goods

TDG RAIL_C

Not dangerous goods

TDG ROAD_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - ROAD

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant		no
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards Acute Health Hazard

SARA 313 Component(s)

2-PHENOXYETHANOL	122-99-6	52.30 %
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Pennsylvania Right To Know

2-PHENOXYETHANOL	122-99-6
1,2-OCTANEDIOL	1117-86-8
SORBIC ACID	110-44-1

New Jersey Right To Know

2-PHENOXYETHANOL	122-99-6
1,2-OCTANEDIOL	1117-86-8
SORBIC ACID	110-44-1

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	All components of this product are on the Canadian DSL
AICS	On the inventory, or in compliance with the inventory
ENCS	On the inventory, or in compliance with the inventory
KECI	On the inventory, or in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	On the inventory, or in compliance with the inventory

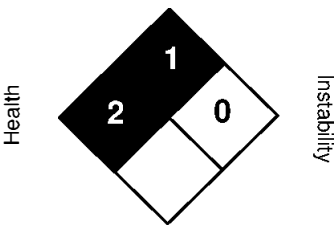
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 11/07/2016

NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p> 	<table><tr><td>HEALTH</td><td>2</td></tr><tr><td>FLAMMABILITY</td><td>1</td></tr><tr><td>PHYSICAL HAZARD</td><td></td></tr></table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	
HEALTH	2						
FLAMMABILITY	1						
PHYSICAL HAZARD							

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Sources of key data used to compile the Safety Data Sheet

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System