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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Trade name : optiphen™ preservative
 Description : preservative
 ™ Trademark, Ashland or its subsidiaries, registered in various countries

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

Recommended use : Personal care
 Cosmetics

<p>Details of the supplier of the safety data sheet Ashland P.O. Box 2219 Columbus, OH 43216 United States of America (USA) 1-614-790-3333 (USA)</p> <p>EHSProductSafety@ashland.com</p>	<p>Emergency telephone 1-800-ASHLAND (1-800-274-5263)</p> <p>Regulatory information 1-614-790-3333 (customer service)</p> <p>Product Information 1-614-790-3333 (USA)</p>
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification


Serious eye damage : Category 1
 Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :




Signal Word : Danger

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Hazard Statements : Causes serious eye damage.
May cause respiratory irritation.

Precautionary Statements : **Prevention:**
Avoid breathing mist or vapors.
Use only outdoors or in a well-ventilated area.
Wear eye protection/ face protection.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
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/ doctor.

Storage:
Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.


SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Classification	Concentration (%)
2-PHENOXYETHANOL	122-99-6	Acute Tox. 4; H302 Eye Dam. 1; H318 STOT SE 3; H335	55.60
1,2-OCTANEDIOL	1117-86-8	Eye Irrit. 2A; H319	44.40


SECTION 4. FIRST AID MEASURES

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- General advice : Move out of dangerous area.
 Consult a physician.
 Show this material safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : Wash off with soap and plenty of water.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
 In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 Continue rinsing eyes during transport to hospital.
 Remove contact lenses.
 Protect unharmed eye.
 Keep eye wide open while rinsing.
 If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
 Do NOT induce vomiting.
 Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
 Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Gastrointestinal discomfort
 Extremely corrosive and destructive to tissue.
 tearing
 Nasal irritation
 Blurred vision
 Nausea
 Local irritation
 Causes serious eye damage.
 May cause respiratory irritation.
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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- Unsuitable extinguishing media : High volume water jet
- Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide
- Specific extinguishing methods :
- Standard procedure for chemical fires.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
- 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.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.

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For personal protection see section 8.
 Smoking, eating and drinking should be prohibited in the application area.
 Provide sufficient air exchange and/or exhaust in work rooms.
 To avoid spills during handling keep bottle on a metal tray.
 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.
 Observe label precautions.
 Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
2-PHENOXYETHANOL	122-99-6
1,2-OCTANEDIOL	1117-86-8


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

Respiratory protection : In the case of vapour formation use a respirator with an approved filter within the capabilities of the respirator/filter combination.
 Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator.

Hand protection


Material : butyl-rubber
 Break through time : 480 min

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- Glove thickness : > 0.5 mm
- Remarks : The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Tightly fitting safety goggles
Eye wash bottle with pure water
- Skin and body protection : Work uniform or laboratory coat.
- Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Color : colorless, light yellow
- Odor : characteristic
- Odor Threshold : No data available
- pH : No data available
- Melting point/freezing point : not determined
- Boiling point/boiling range : not determined
- Flash point : 127.2 - 127.8 °C
- Evaporation rate : not determined
- Upper explosion limit : not determined
- Lower explosion limit : not determined
- Vapor pressure : not determined
- Relative vapor density : not determined
- Relative density : No data available

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Density : 1.0126 - 1.0217 g/cm³ (25 °C)

Solubility(ies)

Water solubility : not determined

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : not determined

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : not determined

Viscosity, kinematic : not determined

Oxidizing properties : Not applicable

Molecular weight : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Vapors may form explosive mixture with air.

Conditions to avoid : Protect from frost, heat and sunlight.

Incompatible materials : Strong bases
Oxidizing agents
Strong acids

Hazardous decomposition products : Carbon dioxide (CO₂)
Carbon monoxide

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Eye contact
Skin contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate : 2,507 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 11.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Components:

2-PHENOXYETHANOL:

Acute oral toxicity : LD50 (Rat, male): 1,394 mg/kg

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

Acute dermal toxicity : LD50 (Rat): 14,391 mg/kg

1,2-OCTANEDIOL:


Acute oral toxicity : LD50 (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 : LC50 (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.

Skin corrosion/irritation

Not classified based on available information.

Product:

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Remarks: Extremely corrosive and destructive to tissue.

Components:

2-PHENOXYETHANOL:

Species: Rabbit

Result: No skin irritation

1,2-OCTANEDIOL:

Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks: May cause irreversible eye damage.

Components:

2-PHENOXYETHANOL:

Species: Rabbit

Result: Corrosive

1,2-OCTANEDIOL:

Result: Irritating to eyes.

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Components:

2-PHENOXYETHANOL:

Species: Guinea pig

Assessment: Does not cause skin sensitization.

Method: OECD Test Guideline 406

1,2-OCTANEDIOL:

Test Type: Local lymph node assay

Species: Mouse

Assessment: Did not cause sensitization on laboratory animals.

Method: OECD Test Guideline 429

Result: Did not cause sensitization on laboratory animals.


GLP: yes

Germ cell mutagenicity

Not classified based on available information.

Components:

2-PHENOXYETHANOL:

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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.

Components:

2-PHENOXYETHANOL:

Effects on fetal development : Test Type: Pre-natal
 Species: Rat
 Application Route: Oral
 General Toxicity Maternal: NOAEL (No observed adverse effect level): ca. 300 mg/kg bw/day
 Method: OPPTS 870.3700

STOT-single exposure

May cause respiratory irritation.

Components:

2-PHENOXYETHANOL:

Assessment: May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

2-PHENOXYETHANOL:


Species: Rat, male and female
 NOAEL: 369 mg/kg
 Application Route: Oral
 Method: OECD Test Guideline 408

Species: Rabbit, male and female

NOAEL: 500 mg/kg

Application Route: Dermal

Aspiration toxicity

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Not classified based on available information.

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No ingredient 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 on OSHA's list of regulated carcinogens.

NTP

No ingredient 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

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 2; Toxic to aquatic life.

Long-term (chronic) aquatic hazard : Not classified based on available information.


Components:

2-PHENOXYETHANOL:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 337 - 352 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 500 mg/l
 Exposure time: 48 h
 Test Type: static test
 Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): > 500 mg/l
 End point: Growth inhibition

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Exposure time: 72 h
Test Type: static test

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (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 (Daphnia): 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 : LC50 (Danio rerio (zebra fish)): > 2.2 - < 22.2 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 176 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 35 mg/l
End point: Growth inhibition
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

Persistence and degradability

Components:


2-PHENOXYETHANOL:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

1,2-OCTANEDIOL:

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

No data available

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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

No data available

Mobility in soil

Components:

No data available

Other adverse effects

Product:

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

Components:

2-PHENOXYETHANOL:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

: This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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.

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International transport regulations



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REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO


Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

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***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

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Serious eye damage or eye irritation
 Specific target organ toxicity (single or repeated exposure)

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.


SARA 313 The following components are subject to reporting levels established by SARA Title III, Section 313:

2-PHENOXYETHANOL	122-99-6	55.60 %
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US State Regulations

Pennsylvania Right To Know

2-PHENOXYETHANOL	122-99-6
1,2-OCTANEDIOL	1117-86-8

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New Jersey Right To Know

2-PHENOXYETHANOL	122-99-6
1,2-OCTANEDIOL	1117-86-8

California Prop. 65

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

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


- TCSI : On the inventory, or in compliance with the inventory
- TSCA : For Cosmetic Use Only
- AIIC : On the inventory, or in compliance with the inventory
- DSL : All components of this product are on the Canadian DSL
- ENCS : On the inventory, or in compliance with the inventory
- ISHL : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

Inventories

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

Other regulations

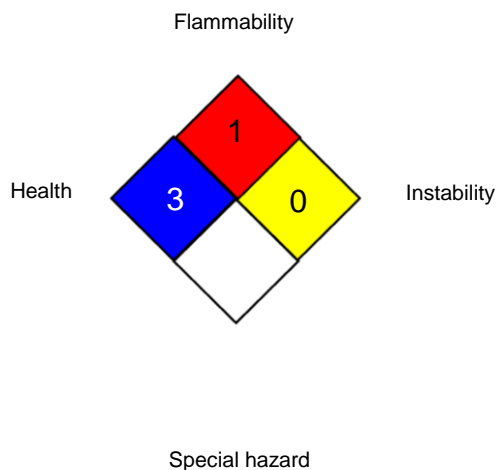
US. Drug Enforcement Administration (DEA) Listed Precursor and Essential Chemicals (21 CFR 1310) Not applicable

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SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

HEALTH	/	3
FLAMMABILITY		1
PHYSICAL HAZARD		0


HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of H-Statements

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and


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Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

This sds has been prepared by Ashland. (<http://www.ashland.com>)

Sources of key data used to compile the Material Safety Data Sheet : Ashland internal data including own and sponsored test reports
 European Union Law with content from the Official Journal of the European Union.
 European Chemicals Agency; the EU authority implementing the EU's chemicals legislation for companies.
 The German Water Hazard Classes.
 ReachCentrum; a series of support services to help comply with REACH regulations.
 The European Commission; proposing legislation, administering and implementing EU policies, and enforcing EU law.
 The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.
 Cefic, the European Chemical Industry Council.
 ESIS European Chemical Substances Information System

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US / EN