PAshland always solving	Page: 1
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Optiphen™ PLUS Trade name

preservative

™ Trademark, Ashland or its subsidiaries, registered in

Regulatory Information Number

1-800-325-3751

various countries

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

Recommended use : Preservative

Details of the supplier of the safety data **Emergency telephone number** sheet 1-800-ASHLAND (1-800-274-5263)

Ashland P.O. Box 2219 Columbus, OH 43216

United States of America (USA)

+1-614-790-3333

Product Information +1-614-790-3333

EHSProductSafety@ashland.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

: Category 2A Eye irritation

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.

P Ashland always solving	Page: 2
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

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

nazardous components			
Chemical name	CAS-No.	Classification	Concentration (%)
2-PHENOXYETHANOL	122-99-6	Acute Tox. 4; H302	52.30
		Eye Irrit. 2A; H319	
1,2-OCTANEDIOL	1117-86-8	Eye Irrit. 2A; H319	41.70
SORBIC ACID	110-44-1	Comb Dust Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335	6.00

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

Ashland always solving	Page: 3
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

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 (CO2)

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.

P Ashland always solving	Page: 4
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

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.

For personal protection see section 8.

Dispose of rinse water in accordance with local and national

regulations.

Ashland always solving	Page: 5
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative	Version: 1.3
™ Trademark, Ashland or its subsidiaries, registered	
in various countries	
830415	

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.

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

Components	CAS-No.
2-PHENOXYETHANOL	122-99-6
1,2-OCTANEDIOL	1117-86-8
SORBIC ACID	110-44-1

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

P Ashland always solving	Page: 6
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative	Version: 1.3
™ Trademark, Ashland or its subsidiaries, registered	
in various countries	
830415	

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 : 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/cm3

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

P Ashland always solving	Page: 7
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative	Version: 1.3
™ Trademark, Ashland or its subsidiaries, registered	
in various countries	
830415	

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 : Inhalation

exposure

Inhalation Skin contact

Eye Contact Ingestion

Acute toxicity

Not classified based on available information.

Components:

2-PHENOXYETHANOL:

Acute oral toxicity : LD50 (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.

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

P Ashland always solving	Page: 8
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

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.

SORBIC ACID:

Acute oral toxicity : LD50 (Rat): 7.36 g/kg

Acute inhalation toxicity : LC50 (Rat): > 38.1 mg/m3

Exposure time: 6 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (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

P Ashland always solving	Page: 9
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

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.

<u>Components:</u> 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

P Ashland always solving	Page: 10
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative	Version: 1.3
™ Trademark, Ashland or its subsidiaries, registered	
in various countries	
830415	

Not classified based on available information.

Components:

2-PHENOXYETHANOL:

Effects on foetal : Test Type: Pre-natal

development Species: Rat

Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

ca. 300 mg/kg bw/day Method: OPPTS 870.3700

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.

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

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

P Ashland always solving	Page: 11
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

equal to 0.1% is on OSHA's list of regulated carcinogens.

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

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 2; Toxic to aquatic life.

Chronic aquatic toxicity : 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

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 (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 : LC50 (Danio rerio (zebra fish)): > 2.2 - < 22.2 mg/l

Ashland always solving ™	Page: 12
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

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

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 : EbC50 (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 (Daphnia magna (Water flea)): 50 mg/l

Exposure time: 21 d Test Type: semi-static test

Method: OECD Test Guideline 211

GLP: yes

Ashland always solving	Page: 13
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative	Version: 1.3
™ Trademark, Ashland or its subsidiaries, registered	
in various countries	
830415	

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 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- : log Pow: 1.16

octanol/water

1,2-OCTANEDIOL:

Partition coefficient: n- : log Pow: 1.0

octanol/water

SORBIC ACID:

Partition coefficient: n- : log Pow: 1.33 octanol/water pH: 2.5

No data available

Mobility in soil

Components:

No data available

Other adverse effects

Product:

Additional ecological : An environmental hazard cannot be excluded in the event of

information unprofessional handling or disposal., Toxic to aquatic life.

Components:

2-PHENOXYETHANOL:

P Ashland always solving	Page: 14
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

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.

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	SUBSIDIARY	PACKING	MARINE
		CLASS	HAZARDS	GROUP	POLLUTANT /
					LTD. QTY.

MX_DG

Not dangerous goods	

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods	

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods	

P Ashland always solving	Page: 15
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative ™ Trademark, Ashland or its subsidiaries, registered in various countries 830415	Version: 1.3

	Not dangerous goods	
TDG_INWT_	С	
	Not dangerous goods	
TDG_RAIL_	С	
	Not dangerous goods	
TDG_ROAD	_c	
	Not dangerous goods	
U.S. DOT - I	NLAND WATERWAYS	
	Not dangerous goods	
CFR_RAIL_	c	
	Not dangerous goods	
U.S. DOT - F	ROAD	
	Not dangerous goods	

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no

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

EPCRA - Emergency Planning and Community Right-to-Know Act 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.

P Ashland always solving	Page: 16
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative	Version: 1.3
™ Trademark, Ashland or its subsidiaries, registered in various countries	
830415	

SARA 311/312 Hazards : Serious eye damage or eye irritation

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 52.30 %

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:

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

TSCA : On TSCA Inventory

Inventories

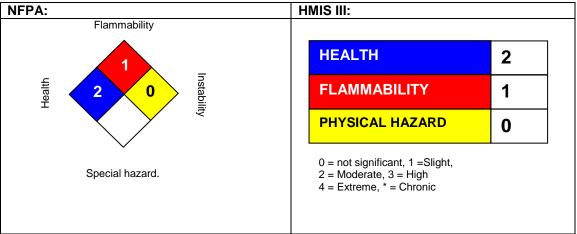
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

P Ashland always solving	Page: 17
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
Optiphen™ PLUS preservative	Version: 1.3
™ Trademark, Ashland or its subsidiaries, registered	
in various countries	
830415	

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 02/22/2018



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
Ashland internal data including own and sponsored test reports
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. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

P Ashland always solving	Page: 18
SAFETY DATA SHEET	Revision Date: 02/22/2018
	Print Date: 7/24/2018
	SDS Number: R0717521
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Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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 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: 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