



SAFETY DATA SHEET

Revision Date: 07/21/2020

Print Date: 7/22/2020

SDS Number: R0717521

Version: 1.6

Optiphen™ PLUS preservative
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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

Recommended use : Preservative

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

EHSPProductSafety@ashland.com

Emergency telephone number

1-800-ASHLAND (1-800-274-5263)

Regulatory information

1-614-790-3333 (customer service)

Product Information

1-614-790-3333

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.

**SAFETY DATA SHEET**

Revision Date: 07/21/2020

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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	52.30
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.



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Revision Date: 07/21/2020

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 830417

- 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 (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



SAFETY DATA SHEET

Revision Date: 07/21/2020

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SDS Number: R0717521

Version: 1.6

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courses.

Hazardous combustion products : Carbon dioxide (CO₂)
 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 protection against fire and explosion : Normal measures for preventive fire protection.

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.

**SAFETY DATA SHEET**

Revision Date: 07/21/2020

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Version: 1.6

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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.

Recommended storage : 59 - 77 °F / 15 - 25 °C
temperature

Further information on : Protect from frost.
storage stability

No decomposition if stored and applied as directed.

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

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
Glove thickness : > 0.5 mm

**SAFETY DATA SHEET**

Revision Date: 07/21/2020

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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. 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

Appearance	: liquid
Physical state	: liquid
Colour	: light yellow
Odour	: characteristic
Odour Threshold	: Not applicable
pH	: No data available
Melting point/freezing point	: not determined
Boiling point/boiling range	: not determined
Flash point	: 124 °C
Evaporation rate	: not determined
Flammability (liquids)	: not determined



SAFETY DATA SHEET

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Version: 1.6

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 830417

Upper explosion limit	: Upper explosion limit not determined
Lower explosion limit	: Lower explosion limit not determined
Vapour pressure	: not determined
Relative vapour density	: not determined
Relative density	: No data available
Density	: 1.014 - 1.024 g/cm3
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

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 acids Strong bases Strong oxidizing agents



SAFETY DATA SHEET

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SDS Number: R0717521

Version: 1.6

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 830417

Hazardous decomposition
 products

carbon dioxide and carbon monoxide
 Carbon monoxide
 Carbon dioxide (CO₂)

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 : LD50 (Rat, female): 1,840 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
 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

**SAFETY DATA SHEET**

Revision Date: 07/21/2020

Print Date: 7/22/2020

SDS Number: R0717521

Version: 1.6

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830417

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

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.

**SAFETY DATA SHEET**

Revision Date: 07/21/2020

Print Date: 7/22/2020

SDS Number: R0717521

Version: 1.6

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830417

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.

Components:**2-PHENOXYETHANOL:**

Effects on foetal
development

: Test Type: Pre-natal

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.

**SAFETY DATA SHEET**

Revision Date: 07/21/2020

Print Date: 7/22/2020

SDS Number: R0717521

Version: 1.6

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830417

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 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

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

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



SAFETY DATA SHEET

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Print Date: 7/22/2020

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 830417

hazard

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
 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:

SAFETY DATA SHEET

Revision Date: 07/21/2020

Print Date: 7/22/2020

SDS Number: R0717521

Version: 1.6

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830417

- 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

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

SORBIC ACID:

**SAFETY DATA SHEET**

Revision Date: 07/21/2020

Print Date: 7/22/2020

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Version: 1.6

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 830417

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**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.



SAFETY DATA SHEET

Revision Date: 07/21/2020

Print Date: 7/22/2020

SDS Number: R0717521

Version: 1.6

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 830417

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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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

**SAFETY DATA SHEET**

Revision Date: 07/21/2020

Print Date: 7/22/2020

SDS Number: R0717521

Version: 1.6

Optiphen™ PLUS preservative
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in various countries
830417

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

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.

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 %
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US State Regulations**Pennsylvania Right To Know**

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

**SAFETY DATA SHEET**

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830417

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

TCSI : On the inventory, or in compliance with the inventory

TSCA : On or in compliance with the active portion of the 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)
- On or in compliance with the active portion of the TSCA inventory

SECTION 16. OTHER INFORMATION**Further information**

Revision Date: 07/21/2020

NFPA:**HMIS III:**



SAFETY DATA SHEET

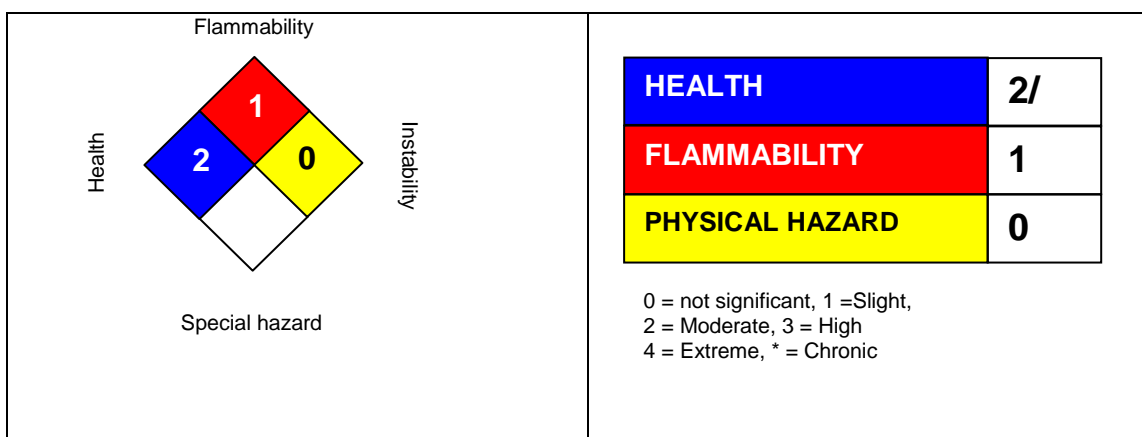
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 830417



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).

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 -

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 in various countries
 830417

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