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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	Emergency telephone number 1-800-ASHLAND (1-800-274-5263) Regulatory Information Number 1-800-325-3751 Product Information +1-614-790-3333
EHSProductSafety@ashland.com	

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.

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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

nazaruous 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	6.00
		Eye Irrit. 2A; H319	
		STOT SE 3; H335	

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

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	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.

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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.
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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 pa	arameters
---	-----------

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 equipmen Hand protection	t	
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

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Colour	: light yellow
Odour	: No data available
Odour Threshold	: No data available
рН	: 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

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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 availab <u>Components:</u> 2-PHENOXYETHANOL:	le information.
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

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	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. <u>Product:</u> Remarks: May cause skin irritation in susceptible persons.		
<u>Components:</u> 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

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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: : Test Type: Ames test Genotoxicity in vitro 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**

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Not classified based on available information. <u>Components:</u> 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. <u>Components:</u> 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** <u>**Components:**</u> 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. <u>Product:</u> 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.

No component of this product present at levels greater than or

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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 <u>Product:</u> 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

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	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 m End point: Growth inhibition Exposure time: 72 h Method: OECD Test Guideline 201 GLP: yes 	g/l
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 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/ End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes	4
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	

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Persistence and degradabilit <u>Components:</u> 2-PHENOXYETHANOL:	у
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 <u>Components:</u>	
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 <u>Components:</u> No data available Other adverse effects <u>Product:</u> Additional ecological information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life.
<u>Components:</u> 2-PHENOXYETHANOL:	

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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
Contaminated packaging	federal regulations.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

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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

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.

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SARA 311/312	Hazards :	Serious eye damage or eye	e irritation	
SARA 302	2 : This material does not conta 302 EHS TPQ.		ain any components with a section	
SARA 313		The following components a established by SARA Title I 2-PHENOXYETHANOL		ng levels 52.30 %
Pennsylvania	Right To Know 2-PHENOXYET	HANOL	122-99-6	
	1,2-OCTANEDIOL		1117-86-8	
	SORBIC ACID		110-44-1	
New Jersey R	New Jersey Right To Know 2-PHENOXYETHANOL		122-99-6	
	1,2-OCTANEDI	OL	1117-86-8	
	SORBIC ACID		110-44-1	
California Pro	p 65	This product does not conta		
		of California to cause cance	er, birth defects, or ar	ny other
The compone DSL	nts of this produc	of California to cause cance reproductive harm. ct are reported in the follow All components of this prod	ving inventories:	-
	nts of this produ : :	reproductive harm. ct are reported in the follow	ring inventories: uct are on the Canad	ian DSL
DSL	nts of this produ : :	reproductive harm. ct are reported in the follow All components of this prod	ring inventories: uct are on the Canad pliance with the inver	ian DSL itory
DSL	:	reproductive harm. ct are reported in the follow All components of this prod On the inventory, or in com	ring inventories: uct are on the Canad pliance with the inven pliance with the inver	ian DSL ntory ntory
DSL AICS ENCS	:	reproductive harm. ct are reported in the follow All components of this prod On the inventory, or in com On the inventory, or in com	ring inventories: uct are on the Canad pliance with the inven pliance with the inven pliance with the inven	ian DSL ntory ntory
DSL AICS ENCS KECI	:	reproductive harm. ct are reported in the follow All components of this prod On the inventory, or in com On the inventory, or in com On the inventory, or in com	ring inventories: uct are on the Canad pliance with the inven pliance with the inven pliance with the inven	ian DSL htory htory htory
DSL AICS ENCS KECI PICCS	:	reproductive harm. ct are reported in the follow All components of this prod On the inventory, or in com On the inventory, or in com On the inventory, or in com Not in compliance with the i	ring inventories: uct are on the Canad pliance with the inven pliance with the inven pliance with the inven	ian DSL htory htory htory

Inventories

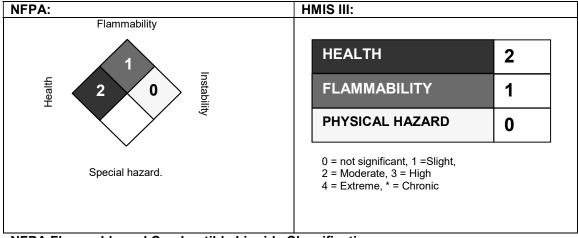
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

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SECTION 16. OTHER INFORMATION

Further information

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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).

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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