# **SAFETY DATA SHEET**



Biosynthetic 5W-30

# **Section 1. Identification**

**GHS** product identifier

: Biosynthetic 5W-30

Product code

: BIOSYN5W30

Other means of identification

: Not available.

Product type : Liquid.

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

Identified uses		
Industrial applications: Synthetic Lubricant		
Uses advised against	Reason	
None known.		

Supplier's details

: Biosynthetic Technologies

The Center 6320 Intech Way

Indianapolis, Indiana 46278

USA

Technical Services: 317-556-1050

info@biosynthetic.com

24hr. CHEMTREC 1-800-424-9300 / : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

International 1-703-527-3887

# Section 2. Hazards identification

**OSHA/HCS** status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: TOXIC TO REPRODUCTION (Fertility) - Category 1B

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 34%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 34%

**GHS label elements** 

Hazard pictograms



Signal word

Danger

**Hazard statements** 

May damage fertility.

**Precautionary statements** 

**Prevention** 

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection.

Wear protective clothing.

Response

: IF exposed or concerned: Get medical attention.

Storage

: Store locked up.

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# Section 2. Hazards identification

**Disposal** 

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

: None known.

# Section 3. Composition/information on ingredients

Substance/mixture
Other means of
identification

: Mixture: Not available.

Ingredient name	%	CAS number
☑stillates (petroleum), hydrotreated heavy paraffinic	≥50 - ≤70	64742-54-7
Distillates (petroleum), solvent-dewaxed heavy paraffinic	≤7.5	64742-65-0
phenol, (tetrapropenyl) deriva-tives	≤0.3	74499-35-7
benzene	<0.1	71-43-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

# Section 4. First aid measures

### **Description of necessary first aid measures**

**Eye contact** 

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact** 

: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### Most important symptoms/effects, acute and delayed

### Potential acute health effects

Eye contact
 Inhalation
 No known significant effects or critical hazards.
 Skin contact
 Ingestion
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.

### Over-exposure signs/symptoms

Eye contact : No specific data.

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# Section 4. First aid measures

**Inhalation**: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

**Skin contact**: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

**Ingestion**: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

#### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

**Specific treatments**: No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is

suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.

### See toxicological information (Section 11)

# Section 5. Fire-fighting measures

#### **Extinguishing media**

Suitable extinguishing media

Unsuitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

: Do not use water jet.

Specific hazards arising from the chemical

Hazardous thermal decomposition products

: In a fire or if heated, a pressure increase will occur and the container may burst.

: Decomposition products may include the following materials: carbon dioxide

carbon monoxide

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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# Section 6. Accidental release measures

### **Environmental precautions**

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

#### **Small spill**

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### Large spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

# Section 7. Handling and storage

#### Precautions for safe handling

**Protective measures** 

Put on appropriate personal protective equipment (see Section 8). Avoid exposure obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

# including any incompatibilities

Conditions for safe storage, : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

#### **Control parameters**

Occupational exposure limits

Ingredient name	Exposure limits
☑istillates (petroleum), hydrotreated heavy paraffinic	ACGIH TLV (United States, 3/2018).  TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction  OSHA PEL (United States, 5/2018).  TWA: 5 mg/m³ 8 hours.  NIOSH REL (United States, 10/2016).
Distillates (petroleum), solvent-dewaxed heavy paraffinic	TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist ACGIH TLV (United States, 3/2018).  TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction OSHA PEL (United States, 5/2018).

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# Section 8. Exposure controls/personal protection

phenol, (tetrapropenyl) deriva-tives benzene

TWA: 5 mg/m3 8 hours.

NIOSH REL (United States, 10/2016).

TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist

None.

ACGIH TLV (United States, 3/2018).

Absorbed through skin. TWA: 0.5 ppm 8 hours. TWA: 1.6 mg/m³ 8 hours. STEL: 2.5 ppm 15 minutes.

STEL: 8 mg/m<sup>3</sup> 15 minutes.

OSHA PEL (United States, 5/2018).

STEL: 5 ppm 15 minutes. TWA: 1 ppm 8 hours.

OSHA PEL Z2 (United States, 2/2013).

TWA: 10 ppm 8 hours. CEIL: 25 ppm

AMP: 50 ppm 10 minutes.

OSHA PEL 1989 (United States, 3/1989).

TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.

NIOSH REL (United States, 10/2016).

TWA: 0.1 ppm 10 hours. STEL: 1 ppm 15 minutes.

# Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

# **Environmental exposure** controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### **Individual protection measures**

**Hygiene measures** 

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### **Eye/face protection**

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields.

# Skin protection Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

### **Body protection**

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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# Section 8. Exposure controls/personal protection

**Respiratory protection** 

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

# Section 9. Physical and chemical properties

#### **Appearance**

**Physical state** : Liquid.

Color : Not available. Odor : Not available. : Not available. **Odor threshold** Hq : Not available. : Not available. **Melting point Boiling point** : Not available. : Not available. Flash point

Flammability (solid, gas) Lower and upper explosive

(flammable) limits

**Evaporation rate** 

: Not available. : Not available.

: Not available.

Vapor pressure

: Not available. Vapor density : Not available. : Not available. **Relative density** Solubility : Not available. Not available. Solubility in water Partition coefficient: n-: Not available.

octanol/water

**Auto-ignition temperature** : Not available. **Decomposition temperature** : Not available.

**Viscosity** : Kinematic (40°C (104°F)): 0.5416 cm<sup>2</sup>/s (54.16 cSt)

: Not available. Flow time (ISO 2431)

# Section 10. Stability and reactivity

: No specific test data related to reactivity available for this product or its ingredients. Reactivity

**Chemical stability** : The product is stable.

Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

**Hazardous decomposition** products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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# Section 11. Toxicological information

# Information on toxicological effects

## **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
istillates (petroleum), hydrotreated heavy paraffinic	LC50 Inhalation Dusts and mists	Rat	5.7 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), solvent-dewaxed heavy paraffinic	LC50 Inhalation Dusts and mists	Rat	>5.53 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
benzene	LD50 Oral	Rat	930 mg/kg	-

## **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>b</b> enzene	Eyes - Moderate irritant	Rabbit	-	88 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

### **Sensitization**

Not available.

## **Mutagenicity**

Not available.

## **Carcinogenicity**

Not available.

## **Classification**

Product/ingredient name	OSHA	IARC	NTP
enzene	+	1	Known to be a human carcinogen.

## **Reproductive toxicity**

Not available.

### **Teratogenicity**

Not available.

# Specific target organ toxicity (single exposure)

Name		Route of exposure	Target organs
	0 ,	Not applicable.	Narcotic effects Respiratory tract irritation

## Specific target organ toxicity (repeated exposure)

Name		Route of exposure	Target organs
<b>b</b> enzene	Category 1		blood system and bone marrow

### **Aspiration hazard**

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# Section 11. Toxicological information

Name	Result
<b>b</b> enzene <b>b</b> enzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

: Not available.

Potential acute health effects

: No known significant effects or critical hazards. Eye contact Inhalation : No known significant effects or critical hazards. **Skin contact** : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

Inhalation : Adverse symptoms may include the following:

> reduced fetal weight increase in fetal deaths skeletal malformations

**Skin contact** : Adverse symptoms may include the following:

> reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion : Adverse symptoms may include the following:

> reduced fetal weight increase in fetal deaths skeletal malformations

#### Delayed and immediate effects and also chronic effects from short and long term exposure

**Short term exposure** 

**Potential immediate** 

effects

: Not available.

**Potential delayed effects** : Not available.

Long term exposure

**Potential immediate** 

effects

: Not available.

Potential delayed effects

: Not available.

Potential chronic health effects

Not available.

General No known significant effects or critical hazards. Carcinogenicity : No known significant effects or critical hazards. Mutagenicity : No known significant effects or critical hazards. **Teratogenicity** : No known significant effects or critical hazards. : No known significant effects or critical hazards. **Developmental effects** 

**Fertility effects** May damage fertility.

#### **Numerical measures of toxicity**

#### **Acute toxicity estimates**

Route	ATE value
	7345.81 mg/kg 2762.64 mg/kg

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# Section 11. Toxicological information

# Section 12. Ecological information

## **Toxicity**

Product/ingredient name	Result	Species	Exposure
Sistillates (petroleum), hydrotreated heavy paraffinic	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute IC50 >100 mg/l	Algae	72 hours
	Acute LC50 >100 mg/l	Fish	96 hours
Distillates (petroleum),	Acute EC50 >100 mg/l	Algae	72 hours
solvent-dewaxed heavy paraffinic	, and the second		
	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
	Chronic NOEL >1 mg/l	Daphnia	21 days
benzene	Acute EC50 29000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 1600000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute EC50 10 μg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 139 μg/l Marine water	Crustaceans - Artemia sp Nauplii	48 hours
	Acute LC50 5.28 ul/L Fresh water	Fish - Oncorhynchus gorbuscha - Fry	96 hours
	Chronic EC10 >1360 mg/l Fresh water	Algae - Scenedesmus subspicatus	96 hours
	Chronic NOEC 98 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 1.5 to 5.4 ul/L Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	4 weeks

# Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
vistillates (petroleum), hydrotreated heavy paraffinic	-	-	Not readily
benzene	-	-	Readily

### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
Distillates (petroleum), hydrotreated heavy paraffinic	>6	-	high
Distillates (petroleum), solvent-dewaxed heavy	2 to 6	-	high
paraffinic benzene	2.13	11	low

# **Mobility in soil**

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects : No known significant effects or critical hazards.

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# Section 13. Disposal considerations

### **Disposal methods**

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# **Section 14. Transport information**

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.

Special precautions for user : Transport within user's premises: always transport in closed containers that are

upright and secure. Ensure that persons transporting the product know what to do in the

event of an accident or spillage.

Transport in bulk according : Not available. to Annex II of MARPOL and

# the IBC Code

# Section 15. Regulatory information

**U.S. Federal regulations** 

: TSCA 6 proposed risk management: lead powder

TSCA 8(a) PAIR: phenol, (tetrapropenyl) deriva-tives

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis

(phosphorodithioate); benzene; lead powder Clean Water Act (CWA) 311: benzene

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)**  : Listed

Clean Air Act Section 602

Class I Substances

: Not listed

Clean Air Act Section 602

: Not listed

Class II Substances

**DEA List I Chemicals** (Precursor Chemicals) : Not listed

**DEA List II Chemicals** (Essential Chemicals)

: Not listed

**SARA 302/304** 

**Composition/information on ingredients** 

No products were found.

**SARA 304 RQ** : Not applicable.

**SARA 311/312** 

Classification : TOXIC TO REPRODUCTION (Fertility) - Category 1B

Composition/information on ingredients

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# Section 15. Regulatory information

Name	%	Classification
phenol, (tetrapropenyl) deriva- tives		SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION (Fertility) - Category 1B

#### **SARA 313**

	Product name	CAS number	%
Form R - Reporting requirements	lead powder	7439-92-1	<0.1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

#### State regulations

**Massachusetts** : The following components are listed: OIL MIST, MINERAL; OIL MIST, MINERAL

**New York** : None of the components are listed. : None of the components are listed. **New Jersey Pennsylvania** : None of the components are listed.

#### California Prop. 65

MARNING: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. Information provided is based on industrial use and may not be relevant to consumer applications.

Ingredient name	Concentration (%)	•	Maximum acceptable dosage level
Ethylene Glycol	<0.01222	-	Yes.
Benzene	<0.01222	Yes.	Yes.
Lead	<0.01222	Yes.	Yes.

### **International lists**

Malaysia

## **National inventory**

**Australia** : Not determined.

Canada : At least one component is not listed in DSL but all such components are listed in NDSL.

China : Not determined. : Not determined. **Europe** 

: Japan inventory (ENCS): Not determined. **Japan** Japan inventory (ISHL): Not determined.

> : Not determined : Not determined.

**New Zealand Philippines** : Not determined.

All components are listed or exempted. Republic of Korea

**Taiwan** : Not determined. **Thailand** : Not determined. : Not determined. **Turkey** 

**United States** : All components are listed or exempted.

: Not determined. **Viet Nam** 

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# Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
Repr. 1B, H360 (Fertility)	Calculation method

**History** 

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revision

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**Key to abbreviations** 

: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

✓ Indicates information that has changed from previously issued version.

#### **Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot quarantee that these are the only hazards that exist.

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