## SECTION 1: IDENTIFICATION

**1.1 GHS Product identifier:** UNITED ATF 9HP (N)

**Other means of identification:**

Not relevant

**1.2 Recommended use of the chemical and restrictions on use:**

Relevant uses (Consumer use): Lubricant
Relevant uses (Professional users): Lubricant
Relevant uses (Industrial user): Lubricant
Uses advised against: All uses not specified in this section or in section 7.3

**1.3 Manufacturer's or supplier´s details:**

UNITED OIL COMPANY PTE LTD
14 Tuas Drive 2, Singapore 638647
638647 Singapore - Singapore - Singapore
Phone: +65 6861 1157 - Fax: +65 6861 3101
enquiry@united-oil.com
http://www.united-oil.com/default.aspx?uc=14

**1.4 Emergency phone number:** +65 68611157

## SECTION 2: HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture:**

**SS 586: Part 2: 2022:**

The product is not classified as dangerous according to SS 586: Part 2: 2022

**2.2 GHS label elements, including precautionary statements:**

**SS 586: Part 2: 2022:**

None

**2.3 Other hazards which do not result in classification:**

Not relevant

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances:**

Not relevant

**3.2 Mixtures:**

**Chemical description:** Mixture based on hydrocarbons and additives

**Components:**

In accordance with SS 586: Part3: 2022 (2023), the product contains:

| Identification | Chemical name/Classification | Concentration |
|---|---|---|
| CAS: 64742-54-7 | **Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, < 20.5 cSt @ 40ºC**<br>Asp. Tox. 1: H304 - Danger | **50 - <75%** |
| CAS: 64742-55-8 | **Distillates (petroleum), hydrotreated light paraffinic, < 3 % IP 346**<br>Asp. Tox. 1: H304 - Danger | **10 - <25%** |
| CAS: 72623-87-1 | **Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (IP 346 < 3 %, < 20.5 cSt @ 40ºC)**<br>Asp. Tox. 1: H304 - Danger | **1 - <2.5%** |
| CAS: 72623-86-0 | **Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based, < 3 % DMSO**<br>Asp. Tox. 1: H304 - Danger | **1 - <2.5%** |
| CAS: 18760-44-6 | **3-(decyloxy)tetrahydrothiophene 1,1-dioxide**<br>Aquatic Chronic 2: H411 | **1 - <2.5%** |
| CAS: 64742-56-9 | **Distillates (petroleum), solvent-dewaxed light paraffinic, < 3 % IP 346**<br>Asp. Tox. 1: H304 - Danger | **1 - <2.5%** |
| CAS: 68784-17-8 | **Isooctadecanoic acid, reaction products with tetraethylenepentamine**<br>Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning | **<1%** |

- CONTINUED ON NEXT PAGE -

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

| Identification | Chemical name/Classification | Concentration |
|---|---|---|
| CAS: 64742-54-7 | **Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, > 20,5 cSt @ 40ºC** | **<1%** |
| CAS: Not relevant | **Alkyl phosphites**<br>Acute Tox. 4: H312; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318; Skin Corr. 1B: H314 - Danger  | **<1%** |
| CAS: Not relevant | **Thio alkyl long chain alkyl ester**<br>Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Sens. 1: H317 - Warning  | **<1%** |

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

## SECTION 4: FIRST-AID MEASURES

**4.1 Description of necessary first-aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation,however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or shower the person affected if necessary thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

**By eye contact:**

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

**4.2 Most important symptoms/effects, acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of immediate medical attention and special treatment needed, if necessary:**

Not relevant

## SECTION 5: FIRE-FIGHTING MEASURES

**5.1 Suitable extinguishing media:**

**Suitable extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers ($CO_2$).

**Unsuitable extinguishing media:**

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

**5.2 Specific hazards arising from the chemical:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Special protective actions for fire-fighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and Self Contained Breathing Apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

- CONTINUED ON NEXT PAGE -

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:**

**For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

**For emergency responders:**

Wear protective equipment. Keep unprotected persons away. See section 8.

**6.2 Environmental precautions:**

It is recommended to avoid environmental spillage of both the product and its container.

**6.3 Methods and materials for containment and cleaning up:**

It is recommended:

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.
Spillages in water or sea:
Small spillages:
Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.
Large spillages:
If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

**6.4 Reference to other sections:**

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling:**

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Specific storage requirements

Minimum Temp.: 5 ºC

Maximum Temp.: 30 ºC

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters/Occupational exposure limits:**

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Substances whose occupational exposure limits have to be assessed in the workplace:

There are no applicable occupational exposure limits for the substances contained in the product

**8.2 Appropriate engineering control measures:**

A.- Individual protection measures, such as personal protective equipment (PPE)

As a preventative measure it is recommended to use basic Personal Protection Equipment. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.
All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

If the working conditions and/or safety measures adopted do not allow keeping the airborne concentration of the product below the exposure limits (if any) or at acceptable levels (if no exposure limits exist), suitable respiratory protection equipment chosen by a qualified professional should be used.

C.- Specific protection for the hands

| Pictogram | PPE | Remarks |
|---|---|---|
|  Mandatory hand protection | Protective gloves against minor risks | Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using chemical protection gloves |

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

| Pictogram | PPE | Remarks |
|---|---|---|
|  Mandatory face protection | Panoramic glasses against splash/projections. | Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing. |

E.- Bodily protection

| Pictogram | PPE | Remarks |
|---|---|---|
| | Work clothing | Replace before any evidence of deterioration. |
| | Anti-slip work shoes | Replace before any evidence of deterioration. |

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

| Emergency measure | Standards | Emergency measure | Standards |
|---|---|---|---|
|  Emergency shower | ANSI Z358-1<br>ISO 3864-1:2011, ISO 3864-4:2011 |  Eyewash stations | DIN 12 899<br>ISO 3864-1:2011, ISO 3864-4:2011 |

**Environmental exposure controls:**

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

*Not relevant due to the nature of the product, not providing information property of its hazards.

- CONTINUED ON NEXT PAGE -

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

**Appearance:**

| | |
|---|---|
| Physical state at 20 ºC: | Liquid |
| Appearance: | Not relevant * |
| Color: | Not relevant * |
| Odor: | Not relevant * |
| Odour threshold: | Not relevant * |

**Volatility:**

| | |
|---|---|
| Boiling point at atmospheric pressure: | Not relevant * |
| Vapour pressure at 20 ºC: | Not relevant * |
| Vapour pressure at 50 ºC: | Not relevant * |
| Evaporation rate at 20 ºC: | Not relevant * |

**Product description:**

| | |
|---|---|
| Density at 20 ºC: | 838 kg/m³ |
| Relative density at 20 ºC: | 0.84 |
| Dynamic viscosity at 20 ºC: | Not relevant * |
| Kinematic viscosity at 20 ºC: | Not relevant * |
| Kinematic viscosity at 40 ºC: | ~26.2 mm²/s |
| Kinematic viscosity at 100 ºC: | ~5.83 mm²/s |
| Concentration: | Not relevant * |
| pH: | Not relevant * |
| Relative vapour density at 20 ºC: | Not relevant * |
| Partition coefficient n-octanol/water 20 ºC: | Not relevant * |
| Solubility in water at 20 ºC: | Not relevant * |
| Solubility properties: | Not relevant * |
| Decomposition temperature: | Not relevant * |
| Melting point/freezing point: | Not relevant * |

**Flammability:**

| | |
|---|---|
| Flash Point: | >180 ºC |
| Flammability (solid, gas): | Not relevant * |
| Autoignition temperature: | Not relevant * |
| Lower flammability limit: | Not relevant * |
| Upper flammability limit: | Not relevant * |

**Particle characteristics:**

| | |
|---|---|
| Median equivalent diameter: | Not relevant * |

**9.2 Other information:**

**Information with regard to physical hazard classes:**

| | |
|---|---|
| Explosive properties: | Not relevant * |
| Oxidising properties: | Not relevant * |
| Corrosive to metals: | Not relevant * |
| Heat of combustion: | Not relevant * |
| Aerosols-total percentage (by mass) of flammable components: | Not relevant * |

**Other safety characteristics:**

*Not relevant due to the nature of the product, not providing information property of its hazards.

- CONTINUED ON NEXT PAGE -

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

| | |
|---|---|
| Surface tension at 20 ºC: | Not relevant * |
| Refraction index: | Not relevant * |

*Not relevant due to the nature of the product, not providing information property of its hazards.

## SECTION 10: STABILITY AND REACTIVITY

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

**10.2 Chemical stability:**

Chemically stable under the indicated conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight | Humidity |
|---|---|---|---|---|
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |

**10.5 Incompatible materials:**

| Acids | Water | Oxidising materials | Combustible materials | Others |
|---|---|---|---|---|
| Avoid strong acids | Not applicable | Precaution | Not applicable | Avoid alkalis or strong bases |

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide ($CO_2$), carbon monoxide and other organic compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects:**

The experimental information related to the toxicological properties of the product itself is not available

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

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## SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
  IARC: Distillates (petroleum), hydrotreated light paraffinic, < 3 % IP 346 (3: Not classifiable as to its carcinogenicity to humans)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous with sensitising effects. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

**Other information:**

Not relevant

**Specific toxicology information on the substances:**

| Identification | Acute toxicity | | Genus |
|---|---|---|---|
| Distillates (petroleum), hydrotreated light paraffinic, < 3 % IP 346<br>CAS: 64742-55-8 | LD50 oral | >5000 mg/kg | Rat |
| | LD50 dermal | >5000 mg/kg | Rabbit |
| | LC50 inhalation mist | >5.53 mg/L (4 h) | Rat |
| Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (IP 346 < 3 %, < 20.5 cSt @ 40ºC)<br>CAS: 72623-87-1 | LD50 oral | >5000 mg/kg | Rat |
| | LD50 dermal | >5000 mg/kg | |
| | LC50 inhalation vapour | >20 mg/L | |
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based, < 3 % DMSO<br>CAS: 72623-86-0 | LD50 oral | >5000 mg/kg | |
| | LD50 dermal | >5000 mg/kg | |
| | LC50 inhalation vapour | >20 mg/L | |
| 3-(decyloxy)tetrahydrothiophene 1,1-dioxide<br>CAS: 18760-44-6 | LD50 oral | >5000 mg/kg | |
| | LD50 dermal | >5000 mg/kg | |
| | LC50 inhalation vapour | >20 mg/L | |
| Distillates (petroleum), solvent-dewaxed light paraffinic, < 3 % IP 346<br>CAS: 64742-56-9 | LD50 oral | >5000 mg/kg | |
| | LD50 dermal | >5000 mg/kg | |
| | LC50 inhalation vapour | >20 mg/L | |
| Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, < 20.5 cSt @ 40ºC<br>CAS: 64742-54-7 | LD50 oral | >5000 mg/kg | Rat |
| | LD50 dermal | >5000 mg/kg | Rat |
| | LC50 inhalation mist | >5.53 mg/L (4 h) | Rat |
| Isooctadecanoic acid, reaction products with tetraethylenepentamine<br>CAS: 68784-17-8 | LD50 oral | >5000 mg/kg | |
| | LD50 dermal | >5000 mg/kg | |
| | LC50 inhalation vapour | >20 mg/L | |

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## SECTION 11: TOXICOLOGICAL INFORMATION (continued)

| Identification | Acute toxicity | | Genus |
|---|---|---|---|
| Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, > 20,5 cSt @ 40ºC<br>CAS: 64742-54-7 | LD50 oral | >5000 mg/kg | |
| | LD50 dermal | >5000 mg/kg | |
| | LC50 inhalation vapour | >20 mg/L | |
| Alkyl phosphites<br>CAS: Not relevant | LD50 oral | >5000 mg/kg | |
| | LD50 dermal | 1100 mg/kg | |
| | LC50 inhalation vapour | >20 mg/L | |
| Thio alkyl long chain alkyl ester<br>CAS: Not relevant | LD50 oral | >5000 mg/kg | |
| | LD50 dermal | >5000 mg/kg | |
| | LC50 inhalation vapour | >20 mg/L | |

**Acute Toxicity Estimate (ATE mix):**

| ATE mix | | Ingredient(s) of unknown toxicity |
|---|---|---|
| Oral | >5000 mg/kg (Calculation method) | 0 % |
| Dermal | >5000 mg/kg (Calculation method) | 0 % |
| LC50 inhalation vapour | >20 mg/L (4 h) (Calculation method) | 0 % |

## SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

**12.1 Toxicity:**

**Acute toxicity:**

| Identification | Concentration | | Species | Genus |
|---|---|---|---|---|
| Distillates (petroleum), hydrotreated light paraffinic, < 3 % IP 346<br>CAS: 64742-55-8 | LC50 | 5000 mg/L (96 h) | Oncorhynchus mykiss | Fish |
| | EC50 | 1000 mg/L (48 h) | Daphnia magna | Crustacean |
| | EC50 | 1000 mg/L (96 h) | Scenedesmus subspicatus | Algae |
| 3-(decyloxy)tetrahydrothiophene 1,1-dioxide<br>CAS: 18760-44-6 | LC50 | >1 - 10 mg/L (96 h) | | Fish |
| | EC50 | >1 - 10 mg/L (48 h) | | Crustacean |
| | EC50 | >1 - 10 mg/L (72 h) | | Algae |
| Alkyl phosphites<br>CAS: Not relevant | LC50 | >0.1 - 1 mg/L (96 h) | | Fish |
| | EC50 | >0.1 - 1 mg/L (48 h) | | Crustacean |
| | EC50 | >0.1 - 1 mg/L (72 h) | | Algae |

**12.2 Persistence and degradability:**

Not relevant

**12.3 Bioaccumulative potential:**

**Substance-specific information:**

| Identification | Bioaccumulation potential | |
|---|---|---|
| Distillates (petroleum), hydrotreated light paraffinic, < 3 % IP 346<br>CAS: 64742-55-8 | BCF | |
| | Pow Log | 3.9 |
| | Potential | |

**12.4 Mobility in soil:**

Not relevant

**12.5 Results of PBT and vPvB assessment:**

Not relevant

**12.6 Other adverse effects:**

Not described

## SECTION 13: DISPOSAL CONSIDERATIONS

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## SECTION 13: DISPOSAL CONSIDERATIONS (continued)

**13.1 Disposal methods:**

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations. In case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See epigraph 6.2.

**Regulations related to waste management:**

Legislation related to waste management:

Environmental Public Health (Toxic Industrial Waste) Regulations.
Hazardous Waste (Control of Export, Import and Transit) Act.

## SECTION 14: TRANSPORT INFORMATION

**Transport of dangerous goods by land:**

With regard to SS 586-1:2021 and the UNRTDG:

| | | |
|---|---|---|
| **14.1** | **UN number:** | Not relevant |
| **14.2** | **UN proper shipping name:** | Not relevant |
| **14.3** | **Transport hazard class(es):** | Not relevant |
| | Labels: | Not relevant |
| **14.4** | **Packing group, if applicable:** | Not relevant |
| **14.5** | **Environmental hazard:** | No |
| **14.6** | **Special precautions for user** | |
| | Physico-Chemical properties: | see section 9 |
| **14.7** | **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** | Not relevant |

**Transport of dangerous goods by sea:**

With regard to IMDG 42-24:

| | | |
|---|---|---|
| **14.1** | **UN number:** | Not relevant |
| **14.2** | **UN proper shipping name:** | Not relevant |
| **14.3** | **Transport hazard class(es):** | Not relevant |
| | Labels: | Not relevant |
| **14.4** | **Packing group, if applicable:** | Not relevant |
| **14.5** | **Marine pollutant:** | No |
| **14.6** | **Special precautions for user** | |
| | Special regulations: | Not relevant |
| | EmS Codes: | |
| | Physico-Chemical properties: | see section 9 |
| | Limited quantities: | Not relevant |
| | Segregation group: | Not relevant |
| **14.7** | **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** | Not relevant |

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2026:

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## SECTION 14: TRANSPORT INFORMATION (continued)

| | | |
|---|---|---|
| **14.1** | **UN number:** | Not relevant |
| **14.2** | **UN proper shipping name:** | Not relevant |
| **14.3** | **Transport hazard class(es):** | Not relevant |
| | Labels: | Not relevant |
| **14.4** | **Packing group, if applicable:** | Not relevant |
| **14.5** | **Environmental hazard:** | No |
| **14.6** | **Special precautions for user** | |
| | Physico-Chemical properties: | see section 9 |
| **14.7** | **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** | Not relevant |

## SECTION 15: REGULATORY INFORMATION

**15.1 Safety, health and environmental regulations specific for the product in question:**

- Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction(CWC): Not relevant

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

**Other legislation:**

Environmental Protection and Management (Hazardous Substances) Regulations.
Environmental Protection and Management Act. (EPMA) (CHAPTER 94A)
Environmental Public Health Act. (EPHA) (CHAPTER 95)
Fire Safety Act. (CHAPTER 109A)
Workplace Safety and Health Act. (CHAPTER 354A)
Workplace Safety and Health (General Provisions) Regulations.

## SECTION 16: OTHER INFORMATION

**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with SS 586: Part 3: 2022 (2023) - Specification for hazard communication for hazardous chemicals and dangerous goods - Part 3 : Preparation of safety data sheets (SDS).

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**SS 586: Part 2: 2022:**

Acute Tox. 4: H312 - Harmful in contact with skin.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
Eye Dam. 1: H318 - Causes serious eye damage.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.

**Advice related to training:**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

http://www.nea.gov.sg

**Abbreviations and acronyms:**

- CONTINUED ON NEXT PAGE -

## SECTION 16: OTHER INFORMATION (continued)

IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
CL50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol-water partition coefficient
Koc: Partition coefficient of organic carbon
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET