



UNITED UNISOL EP 2

SECTION 1: IDENTIFICATION

- 1.1 GHS Product identifier:** UNITED UNISOL EP 2
Other means of identification:
Non-applicable
- 1.2 Recommended use of the chemical and restrictions on use:**
Relevant uses: 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 2:2014:
Classification of this product has been carried out in accordance with SS 586 : Part 2 : 2014
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Carc. 1B: Carcinogenicity, Category 1B, H350
Eye Dam. 1: Serious eye damage, Category 1, H318
Muta. 2: Germ cell mutagenicity, Category 2, H341
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1: Sensitisation, skin, Category 1, H317
- 2.2 GHS label elements, including precautionary statements:**
SS 586:Part 2:2014:
Danger
- 
- Hazard statements:**
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Carc. 1B: H350 - May cause cancer.
Eye Dam. 1: H318 - Causes serious eye damage.
Muta. 2: H341 - Suspected of causing genetic defects.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
- Precautionary statements:**
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P264: Wash thoroughly after use.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P501: Dispose of contents and / or their container according to the separated collection system used in your municipality.
- Substances that contribute to the classification**
alkanes, C14-17, chloro; Dodecan-1-ol, ethoxylated; N,N'-methylenebis(morpholine)
- 2.3 Other hazards which do not result in classification:**
Non-applicable

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Non-applicable

3.2 Mixtures:

Chemical description: Mixture based on hydrocarbons and additives

Components:

In accordance with SS 586:Part 3:2008 (2014), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic, < 3 % IP 346, > 20,5 cSt @ 40°C	50 - <75 %
CAS: 85535-85-9	alkanes, C14-17, chloro Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Carc. 2: H351 - Warning	10 - <25 %
CAS: 9002-92-0	Dodecan-1-ol, ethoxylated Eye Dam. 1: H318 - Danger	2.5 - <10 %
CAS: 68920-66-1	Alcohols, C16-18 and C18-unsatd., ethoxylated (10-14 EO) Skin Irrit. 2: H315 - Warning	2.5 - <10 %
CAS: 5625-90-1	N,N'-methylenebismorpholine Acute Tox. 4: H302+H312+H332; Carc. 1B: H350; Eye Dam. 1: H318; Muta. 2: H341; Skin Corr. 1B: H314; Skin Sens. 1: H317; STOT RE 2: H373 - Danger	2.5 - <10 %
CAS: 111-42-2	2,2'-iminodiethanol Acute Tox. 4: H302; Carc. 2: H351; Eye Dam. 1: H318; Skin Irrit. 2: H315; STOT RE 2: H373 - Danger	<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:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. 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:

Non-applicable

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable extinguishing media:

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SECTION 5: FIRE-FIGHTING MEASURES (continued)

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

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 individual respiratory equipment. 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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

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.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and materials for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

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 to prevent ergonomic and toxicological risks

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

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

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SECTION 7: HANDLING AND STORAGE (continued)

Maximum time: 6 Months

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:

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

Workplace Safety and Health (General Provisions) Regulations:

Identification	Occupational exposure limits		
2,2'-iminodiethanol CAS: 111-42-2	PEL (Long Term)	0.46 ppm	2 mg/m ³
	PEL (Short Term)		
Phosphoric acid CAS: 7664-38-2	PEL (Long Term)		1 mg/m ³
	PEL (Short Term)		3 mg/m ³

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

Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

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.- Ocular and facial protection

Pictogram	PPE	Remarks
 Mandatory face protection	Face shield	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
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	For professional use only. Clean periodically according to the manufacturer's instructions.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Remarks
 Mandatory foot protection	Safety footwear for protection against chemical risk	Replace boots at any sign of deterioration.

F.- Additional emergency measures

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

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Not available
Color:	Not available
Odor:	Not available
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	931.7 kg/m ³
Relative density at 20 °C:	0.932
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	~31.13 cSt
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

Flammability:

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

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Flash Point:	~180 °C
Heat of combustion:	Non-applicable *
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

Explosive:

Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *

9.2 Other information:

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

*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.

10.2 Chemical stability:

Chemically stable under the 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 (CO₂), 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, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous 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 dangerous for this effect. For more information see section 3.
- C- Contact with the skin and the eyes (acute effect):
 - Contact with the skin: Produces skin inflammation.
 - Contact with the eyes: Produces serious eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
 - Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
IARC: Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, > 20,5 cSt @ 40°C (3); 2,2'-iminodiethanol (2B); alkanes, C14-17, chloro (2B)
 - Mutagenicity: Exposure to this product can cause genetic modifications. For more specific information on the possible health effects see section 2.
 - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous 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 dangerous with sensitising effects. For more information see section 3.
 - Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.
- 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 dangerous 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, however, it does contain substances which are classified as dangerous due to repetitive exposure. 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 dangerous for this effect. For more information see section 3.
- H- Aspiration hazard:

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

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
N,N'-methylenbis(morpholine) CAS: 5625-90-1	LD50 oral	500 mg/kg	Rat
	LD50 dermal	1100 mg/kg (ATEi)	
	LC50 inhalation	11 mg/L (4 h) (ATEi)	
Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, > 20,5 cSt @ 40°C CAS: 64742-54-7	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L (4 h)	
Alcohols, C16-18 and C18-unsatd., ethoxylated (10-14 EO) CAS: 68920-66-1	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L (4 h)	
Dodecan-1-ol, ethoxylated CAS: 9002-92-0	LD50 oral	1000 mg/kg	Rat
	LD50 dermal	7735 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L (4 h)	
alkanes, C14-17, chloro CAS: 85535-85-9	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L (4 h)	
2,2'-iminodiethanol CAS: 111-42-2	LD50 oral	710 mg/kg	Rat
	LD50 dermal	12200 mg/kg	Rabbit
	LC50 inhalation	>5 mg/L	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	7142.86 mg/kg (Calculation method)	0 %
Dermal	44000 mg/kg (Calculation method)	0 %
Inhalation	440 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

12.1 Toxicity:

Identification	Acute toxicity		Species	Genus
alkanes, C14-17, chloro CAS: 85535-85-9	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
N,N'-methylenebis(morpholine) CAS: 5625-90-1	LC50	380 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		
2,2'-iminodiethanol CAS: 111-42-2	LC50	800 mg/L (24 h)	Carassius auratus	Fish
	EC50	180 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	75 mg/L (72 h)	Scenedesmus subspicatus	Algae

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
Dodecan-1-ol, ethoxylated CAS: 9002-92-0	BOD5	Non-applicable	Concentration	30 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	74 %
2,2'-iminodiethanol CAS: 111-42-2	BOD5	0.03 g O2/g	Concentration	100 mg/L
	COD	1.52 g O2/g	Period	21 days
	BOD5/COD	0.02	% Biodegradable	54 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
Dodecan-1-ol, ethoxylated CAS: 9002-92-0	BCF	81
	Pow Log	
	Potential	Moderate
2,2'-iminodiethanol CAS: 111-42-2	BCF	1
	Pow Log	-1.43
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Dodecan-1-ol, ethoxylated CAS: 9002-92-0	Koc	150	Henry	Non-applicable
	Conclusion	High	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
2,2'-iminodiethanol CAS: 111-42-2	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	3.4E-2 N/m (148.45 °C)	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Non-applicable

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-dangerous residue. We do not recommended disposal down the drain. 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 (2014):



- | | |
|---|--|
| 14.1 UN number: | UN3082 |
| 14.2 UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(alkanes, C14-17, chloro) |
| 14.3 Transport hazard class(es): | 9 |
| Labels: | 9 |
| 14.4 Packing group, if applicable: | III |
| 14.5 Environmental hazard: | Yes |
| 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: | Non-applicable |

Transport of dangerous goods by sea:

With regard to IMDG 39-18:



- | | |
|---|--|
| 14.1 UN number: | UN3082 |
| 14.2 UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(alkanes, C14-17, chloro) |
| 14.3 Transport hazard class(es): | 9 |
| Labels: | 9 |
| 14.4 Packing group, if applicable: | III |
| 14.5 Marine pollutant: | Yes |
| 14.6 Special precautions for user | |
| Special regulations: | 335, 969, 274 |
| EmS Codes: | F-A, S-F |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| Segregation group: | Non-applicable |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: | Non-applicable |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2021:

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SECTION 14: TRANSPORT INFORMATION (continued)



14.1 UN number:	UN3082
14.2 UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (alkanes, C14-17, chloro)
14.3 Transport hazard class(es):	9
Labels:	9
14.4 Packing group, if applicable:	III
14.5 Environmental hazard:	Yes
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:	Non-applicable

SECTION 15: REGULATORY INFORMATION

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

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.
Environmental Public Health Act.
Fire Safety Act.
Workplace Safety and Health Act.
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 586Part 3:2008 (2014) - 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 2:

H315: Causes skin irritation.
H318: Causes serious eye damage.
H317: May cause an allergic skin reaction.
H341: Suspected of causing genetic defects.
H350: May cause cancer.
H411: Toxic to aquatic life with long lasting effects.

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 2:2014:

Acute Tox. 4: H302 - Harmful if swallowed.
Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Carc. 1B: H350 - May cause cancer.
Carc. 2: H351 - Suspected of causing cancer.
Eye Dam. 1: H318 - Causes serious eye damage.
Muta. 2: H341 - Suspected of causing genetic defects.
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.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

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.

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SECTION 16: OTHER INFORMATION (continued)

Principal bibliographical sources:

<http://www.nea.gov.sg>

Abbreviations and acronyms:

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

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