

# SAFETY DATA SHEET

## ECOCLEAN™ HSDI

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Product name** : EcoClean (TM) HSDI  
**Product code** : 11328  
**Product description** : Mixture  
**Product type** : Liquid.

Other means of identification

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

##### Identified uses

Petrochemical industry: Fuel additive.

#### 1.3 Details of the supplier of the safety data sheet

**Supplier/Manufacturer** : Innospec Limited  
 Innospec Manufacturing Park  
 Oil Sites Road  
 Ellesmere Port  
 Cheshire CH65 4EY  
 United Kingdom

**Telephone no.:** : +44 (0)151 355 3611  
**Fax no.** : +44 (0)151 356 2349  
**e-mail address of person responsible for this SDS** : sdsinfo@innospecinc.com  
**NON-emergency enquiries** : corporatecommunications@innospecinc.com

#### 1.4 Emergency telephone number

In Europe, Middle East, Africa, Asia Pacific and South America 24 hour / 7 day emergency response for Innospec products is provided by the NCEC CARECHEM 24 global network



The main regional centres are listed here in Section 1.

Other local contact numbers for specific language support in Asia Pacific are listed in Section 16

Country information	: Emergency telephone number	Location
Europe ( all countries, all languages )	: +44 (0) 1235 239 670	London, UK
Middle East, Africa ( Arabic, French, English )	: +44 (0) 1235 239 671	Lebanon
Middle East, Africa ( French, Portuguese, English )	: +44 (0) 1235 239 670	London UK
Asia Pacific ( all countries except China )	: +65 3158 1074	Singapore
China	: +86 10 5100 3039	Beijing China
South America ( all countries )	: +1 215 207 0061	Philadelphia USA

In USA, Canada and North America, 24 hour / 7 day emergency response for Innospec products is provided by the CHEMTREC (R) Emergency Call Center based in the USA

toll-free telephone numbers USA : 800 424 9300 Canada, Puerto Rico, Virgin Islands : +1 800 424 9300  
 In case of difficulty using the toll-free number, or for ships at sea, please call +1 703 527 3887

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

See section 16.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Carc. 2, H351

STOT SE 3, H336

Asp. Tox. 1, H304

Aquatic Chronic 2, H411

#### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : Carc. Cat. 3; R40  
Xn; R65  
R66, R67  
N; R51/53

**Physical/chemical hazards** : Not applicable.

**Human health hazards** : Limited evidence of a carcinogenic effect. Harmful: may cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

**Environmental hazards** : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : Suspected of causing cancer.  
May be fatal if swallowed and enters airways.  
May cause drowsiness or dizziness.  
Toxic to aquatic life with long lasting effects.

**Supplemental label elements** : Contains Tetraethylenepentamine linear, cyclic and branched. May produce an allergic reaction. Repeated exposure may cause skin dryness or cracking.

#### Precautionary statements

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapour.

**Response** : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

**Storage** : Store locked up.

**Disposal** : Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Hazardous ingredients** : Hydrocarbons, C10, aromatics, >1% naphthalene

**Hazard symbol or symbols** :

## SECTION 2: Hazards identification



- Indication of danger** : Harmful, Dangerous for the environment
- Risk phrases** : R40- Limited evidence of a carcinogenic effect.  
R65- Harmful: may cause lung damage if swallowed.  
R66- Repeated exposure may cause skin dryness or cracking.  
R67- Vapours may cause drowsiness and dizziness.  
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Safety phrases** : S36/37- Wear suitable protective clothing and gloves.  
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.
- Hazardous ingredients** : Hydrocarbons, C10, aromatics, >1% naphthalene  
Hydrocarbons, C10-13, aromatics, >1% naphthalene
- Supplemental label elements** : Contains Tetraethylenepentamine linear, cyclic and branched. May produce an allergic reaction.
- Special packaging requirements**
- Containers to be fitted with child-resistant fastenings** : Not applicable.
- Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

- Other hazards which do not result in classification** : Not available.

## SECTION 3: Composition/information on ingredients

**Substance/mixture** : Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Hydrocarbons, C10, aromatics, >1% naphthalene	REACH #: 01-2119463588-24 EC: 919-284-0 CAS: 64742-94-5	50-75	Carc. Cat. 3; R40  Xn; R65 R66, R67 N; R51/53	Carc. 2, H351  STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	REACH #: 01-2119456620-43 EC: 926-141-6 CAS: 64742-47-8 Index: 649-422-00-2	10-20	Xn; R65  R66	Asp. Tox. 1, H304	[1] [2]
Hydrocarbons, C10-13, aromatics, >1% naphthalene	REACH #: 01-2119451151-53 EC: 926-273-4 CAS: 64742-94-5	10-20	Carc. Cat. 3; R40  Xn; R65 R66 N; R51/53	Carc. 2, H351  Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
naphthalene	REACH #: Compliant EC: 202-049-5 CAS: 91-20-3 Index: 601-052-00-2	0.1-0.25	Carc. Cat. 3; R40 Xn; R22 N; R50/53	Flam. Sol. 2, H228 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1] [2]
Solvent naphtha	REACH #: Compliant	1-2.5	Xn; R65	Skin Irrit. 2, H315	[1]

### SECTION 3: Composition/information on ingredients

(petroleum), heavy arom.	EC: 265-198-5 CAS: 64742-94-5 Index: 649-424-00-3		Xi; R37/38 N; R51/53	STOT SE 3, H335i Asp. Tox. 1, H304	
Tetraethylenepentamine linear, cyclic and branched	REACH #: 01-2119487290-37 EC: 292-587-7 CAS: 90640-66-7 Index: 612-065-00-8	0.25-1	Xn; R21/22  C; R34 R43 N; R51/53  <b>See Section 16 for the full text of the R-phrases declared above.</b>	Acute Tox. 4, H302  Acute Tox. 4, H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

#### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

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

Innospec REACH (pre-) registrations DO NOT cover the following:

1. The manufacture of these products by Innospec outside the EU unless covered by the Only Representative provisions, and
2. The importation of these products into Europe by non-Innospec companies. Re-importation by non-Innospec companies is not covered by Innospec (pre-) registrations

Customers and other third parties importing and/or re-importing Innospec products into Europe will need either:

- Their own (pre-) registration for substances contained in the imported product, or constituent monomers (imported above 1 tonne per year and >2% by weight) in the case of imported polymers, or
- In the case of importation only, to make use of the "Only Representative" provisions, if available.

### SECTION 4: First aid measures

#### 4.1 Description of 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.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if symptoms occur. 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. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. 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.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**SECTION 4: First aid measures****4.2 Most important symptoms and effects, both acute and delayed****Potential acute health effects**

- Eye contact** : May cause eye irritation.
- Inhalation** : Vapours may cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : Aspiration hazard if swallowed. Can enter lungs and cause damage.

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo
- Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

**5.2 Special hazards arising from the substance or mixture**

- Hazards from the substance or mixture** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides

**5.3 Advice for firefighters**

- 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also Section 8 for additional information on hygiene measures.

**6.2 Environmental precautions**

- : Avoid dispersal of spilt 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). Water polluting material. May be harmful to the environment if released in large quantities.

**6.3 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. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the 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. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

**6.4 Reference to other sections**

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**7.1 Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapour or mist. Avoid release to the environment. Refer to special instructions/safety data sheet. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. 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.



## SECTION 7: Handling and storage

**7.2 Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
Hydrocarbons, C10, aromatics, >1% naphthalene	<b>EH40-WEL (United Kingdom (UK)).</b> Supplier's information: 5 mg/m <sup>3</sup> 8 hour(s). Form: Mineral oil , Mist
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	<b>EU OEL (Europe, 2009).</b> Supplier's information Reciprocal Calculation Procedure (RCP) : 1200 mg/m <sup>3</sup> 8 hour(s).
naphthalene	<b>EU OEL (Europe, 12/2009). Notes: list of indicative occupational exposure limit values</b> TWA: 10 ppm, 0 times per shift, 8 hour(s). TWA: 50 mg/m <sup>3</sup> , 0 times per shift, 8 hour(s).

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

#### Derived effect levels

Product/ingredient name	Type	Exposure	Value	Population	Effects
Hydrocarbons, C10, aromatics, >1% naphthalene	DNEL	Long term Dermal	12.5 mg/kg bw/day	Workers	-
	DNEL	Long term Inhalation	151 mg/m <sup>3</sup>	Workers	-
	DNEL	Long term Dermal	7.5 mg/kg bw/day	Consumers	-
	DNEL	Long term Inhalation	32 mg/m <sup>3</sup>	Consumers	-
	DNEL	Long term Oral	7.5 mg/kg bw/day	Consumers	-

#### Predicted effect concentrations

No PECs available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**SECTION 8: Exposure controls/personal protection****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 or dusts. Recommended: splash goggles
- 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. >8 hours (breakthrough time): Viton®  
1-4 hours (breakthrough time): nitrile rubber
- 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.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter (Type A)
- 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.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid. [Clear.]
- Colour** : Amber.
- Odour** : Aromatic. Hydrocarbon.
- Odour threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not applicable.
- Initial boiling point and boiling range** : Lowest known value: 168.01°C (334.4°F) (1,2,4-trimethylbenzene). Weighted average: 200.22°C (392.4°F)
- Flash point** : Closed cup: 63.5°C (146.3°F) [Pensky-Martens.]
- Evaporation rate** : Highest known value: 0.05 (Solvent naphtha (petroleum), heavy arom.) Weighted average: 0.04 compared with butyl acetate
- Flammability (solid, gas)** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : Greatest known range: Lower: 0.6% Upper: 7% (Solvent naphtha (petroleum), heavy arom.)
- Vapour pressure** : Highest known value: 0.1 kPa (0.8 mm Hg) (at 20°C) (Solvent naphtha (petroleum), heavy arom.). Weighted average: 0.08 kPa (0.6 mm Hg) (at 20°C)
- Vapour density** : Highest known value: 6.5 (Air = 1) (distillates (petroleum), hydrotreated light). Weighted average: 5.31 (Air = 1)
- Relative density** : Not available.
- Density** : 0.9 g/cm<sup>3</sup> [15°C (59°F)]
- Solubility(ies)** : Insoluble in the following materials: cold water, hot water.



## SECTION 9: Physical and chemical properties

- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Lowest known value: 200 to 250°C (392 to 482°F) (distillates (petroleum), hydrotreated light ).
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic: 0.05 cm<sup>2</sup>/s (5 cSt)  
Kinematic (40°C (104°F)): 0.04 cm<sup>2</sup>/s (4 cSt)
- Explosive properties** : Not available.
- Oxidising properties** : Not available.

### 9.2 Other information

- Pour point** : <-39°C

## SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	LC50 Inhalation Vapour	Rat	>5000 mg/m <sup>3</sup>	8 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
naphthalene	LC50 Inhalation Vapour	Rat	>340 mg/m <sup>3</sup>	1 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	490 mg/kg	-
Solvent naphtha (petroleum), heavy arom.	LC50 Inhalation Vapour	Rat	>590 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>2 mL/kg	-
	LDLo Oral	Rat	5 mL/kg	-
Tetraethylenepentamine linear, cyclic and branched	LD50 Dermal	Rabbit	660 mg/kg	-
	LD50 Oral	Rat	2100 to 3990 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation

EcoClean (TM) HSDI

## SECTION 11: Toxicological information

Hydrocarbons, C10-13, aromatics, >1% naphthalene naphthalene	Skin - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-
	Skin - Severe irritant	Rabbit	-	-	-

### Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	skin	Rat	Not sensitizing

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	-	Experiment: In vivo Subject: Bacteria	Negative

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : May cause eye irritation.
- Inhalation** : Vapours may cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : Aspiration hazard if swallowed. Can enter lungs and cause damage.

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

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo
- Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

### 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

- General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Carcinogenicity** : May cause cancer, based on animal data. Limited evidence of a carcinogenic effect. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.

## SECTION 11: Toxicological information

- Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Hydrocarbons, C10, aromatics, >1% naphthalene	Acute EC50 1 to 3 mg/l	Algae	72 hours
naphthalene	Acute EC50 3 to 10 mg/l	Daphnia	48 hours
	Acute LC50 2 to 5 mg/l	Fish	96 hours
	Acute EC50 1.96 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
Solvent naphtha (petroleum), heavy arom.	Acute LC50 2350 ug/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 1.6 mg/L	Fish	96 hours
	Acute EC50 1 to 3 mg/l	Algae	72 hours
	Acute EC50 3 to 10 mg/l	Daphnia	48 hours
	Acute LC50 2 to 5 mg/l	Fish	96 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	OECD 301F Ready Biodegradability - Manometric Respirometry Test	69 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	-	-	Readily
Solvent naphtha (petroleum), heavy arom.	-	-	Inherent

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Hydrocarbons, C10, aromatics, >1% naphthalene	-	-	-
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	6 to 8	-	high
naphthalene	3.3	>100	high
Solvent naphtha (petroleum), heavy arom.	2.9 to 6.1	130 to 159	high
Tetraethylenepentamine linear, cyclic and branched	<0	-	low

### 12.4 Mobility in soil

- Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.  
**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

## SECTION 12: Ecological information

- PBT** : Not applicable.  
**vPvB** : Not applicable.

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

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.





- Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

- Special precautions** : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN/ADNR	IMDG	IATA
<b>14.1 UN number</b>	UN3082	UN3082	UN3082	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom.)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom.)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom.). Marine pollutant (Solvent naphtha (petroleum), heavy arom., distillates (petroleum), hydrotreated light )	Environmentally hazardous substance, liquid, n.o.s. (Solvent naphtha (petroleum), heavy arom.)
<b>14.3 Transport hazard class(es)</b>	9 	9 	9 	9 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes.

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## SECTION 14: Transport information

<b>14.6 Special precautions for user</b>	Not available.	Not available.	Not available.	Not available.
<b>Additional information</b>	<p><b>Hazard identification number</b> 90</p> <p><b>Limited quantity</b> 5 L</p> <p><b>Special provisions</b> 274 335 601</p> <p><b>Tunnel code</b> (E)</p>	-	<b>Emergency schedules (EmS)</b> F-A, S-F	

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

Other EU regulations

**Black List Chemicals** : Not listed

**Priority List Chemicals** : Listed

**Integrated pollution prevention and control list (IPPC) - Air** : Not listed

**Integrated pollution prevention and control list (IPPC) - Water** : Not listed

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Hydrocarbons, C10, aromatics, >1% naphthalene	Carc. Cat. 3; R40	-	-	-
Hydrocarbons, C10-13, aromatics, >1% naphthalene	Carc. Cat. 3; R40	-	-	-
naphthalene	Carc. Cat. 3; R40	-	-	-

International regulations

## SECTION 15: Regulatory information

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

### International lists

- Australia inventory (AICS)** : All components are listed or exempted.
- Canada inventory** : All components are listed or exempted.
- China inventory (IECSC)** : All components are listed or exempted.
- EU Inventory** : At least one component is not listed in EINECS but all such components are listed in ELINCS.  
Please contact your supplier for information on the inventory status of this material.
- Japan inventory (ENCS)** : Not determined.
- Korea inventory (KECI)** : All components are listed or exempted.
- New Zealand Inventory of Chemicals (NZIoC)** : All components are listed or exempted.
- Philippines inventory (PICCS)** : All components are listed or exempted.
- United States inventory (TSCA 8b)** : All components are listed or exempted.

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

📌 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Carc. 2, H351	Expert judgment
STOT SE 3, H336	Expert judgment
Asp. Tox. 1, H304	Expert judgment
Aquatic Chronic 2, H411	Expert judgment

**Full text of abbreviated H statements** :

- H228 Flammable solid.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335i May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.



## SECTION 16: Other information

<b>Full text of classifications [CLP/GHS]</b>	: Acute Tox. 4, H302 Acute Tox. 4, H312 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Aquatic Chronic 2, H411 Asp. Tox. 1, H304 Carc. 2, H351 Eye Dam. 1, H318 Eye Irrit. 2, H319 Flam. Sol. 2, H228 Skin Corr. 1A, H314 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335i  STOT SE 3, H336	ACUTE TOXICITY: ORAL - Category 4 ACUTE TOXICITY: SKIN - Category 4 AQUATIC TOXICITY (ACUTE) - Category 1 AQUATIC TOXICITY (CHRONIC) - Category 1 AQUATIC TOXICITY (CHRONIC) - Category 2 ASPIRATION HAZARD - Category 1 CARCINOGENICITY - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 FLAMMABLE SOLIDS - Category 2 SKIN CORROSION/IRRITATION - Category 1A SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): INHALATION [Respiratory tract irritation] - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3
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<b>Full text of abbreviated R phrases</b>	: R40- Limited evidence of a carcinogenic effect. R22- Harmful if swallowed. R21/22- Harmful in contact with skin and if swallowed. R65- Harmful: may cause lung damage if swallowed. R34- Causes burns. R37/38- Irritating to respiratory system and skin. R43- May cause sensitisation by skin contact. R66- Repeated exposure may cause skin dryness or cracking. R67- Vapours may cause drowsiness and dizziness. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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<b>Full text of classifications [DSD/DPD]</b>	: Carc. Cat. 3 - Carcinogen category 3 C - Corrosive Xn - Harmful Xi - Irritant N - Dangerous for the environment
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### Emergency contact numbers for local language support in Asia Pacific region

Country information	Languages supported	Telephone no.:	Location
Australia	English	+61 2 8014 4558	Australia
Bangladesh	Bengali, English	+65 3158 1200	Singapore
China	Mandarin, English	+86 10 5100 3039	Beijing China
India	Hindi, English	+65 3158 1198	Singapore
Indonesia (local toll free number)	Bahasa Indonesian, English	00780 3011 0293	Indonesia
Japan	Japanese, English	+81 3 4578 9341	Japan
Korea	Korean, English	+65 3158 1285	Singapore
Malaysia	Bahasa Malaysian, English	+60 3 6207 4347	Malaysia
New Zealand	English	+64 9929 1483	New Zealand
Pakistan	Urdu, English	+65 3158 1329	Singapore
Philippines	Tagalog, English	+65 3158 1203	Singapore
Sri Lanka	Sinhalese, English	+65 3158 1195	Singapore

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## SECTION 16: Other information

Thailand (local toll free number)	Thai, English	001800 1 2066 6751	Thailand
Vietnam	Vietnamese, English	+65 3158 1255	Singapore

### 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 guarantee that these are the only hazards that exist.