

SAFETY DATA SHEET

Unifined Gas Oil - UGO



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

1.1 Product identifier

Product name : Unifined Gas Oil - UGO
Material uses : Intermediate refinery stream
EC number : 295-407-5
CAS number : 92045-24-4

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

Not applicable.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Distributor : Kuwait Petroleum Corporation
P.O. Box 26565 Safat
13126 Safat
Kuwait
Tel. +965 1858585, Fax 2423371/2467159/246

e-mail address of person responsible for this SDS : SDSinfo@Q8.com, communication preferably in English only.

1.4 Emergency telephone number

Middle East : +44 (0) 1235 239 671
Global (English only) : +44 (0) 1865 407 333



SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mono-constituent substance

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

Flam. Liq. 3, H226
Acute Tox. 4, H332
Skin Irrit. 2, H315
STOT RE 2, H373
Asp. Tox. 1, H304
Aquatic Chronic 2, H411

Ingredients of unknown toxicity : None.

Ingredients of unknown ecotoxicity : None.

Classification according to Directive 67/548/EEC [DSD]

Carc. Cat. 3; R40
Xn; R20, R65
Xi; R38
N; R51/53

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 :



SECTION 2: Hazards identification

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapor.
 H332 Harmful if inhaled.
 H315 Causes skin irritation.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H304 May be fatal if swallowed and enters airways.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response : P310 - Immediately call a POISON CENTER or physician.
 P331 - Do NOT induce vomiting.

Storage : P235 - Keep cool.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII : Not available.

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : Not available.

Other hazards which do not result in classification : Hazardous concentrations of hydrogen sulphide (H₂S) gas may accumulate in the vapour space of storage vessels. Standard procedures for opening or entering tanks, vessels or other containers must strictly be followed to avoid inhalation of this acutely toxic gas. Defatting to the skin.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mono-constituent substance

| Product/ingredient name | Identifiers | % | Classification | | Type |
|---|----------------------------------|-----|---|---|------|
| | | | 67/548/EEC | Regulation (EC) No. 1272/2008 [CLP] | |
| Gas oils (petroleum), hydrotreated light vacuum | EC: 295-407-5 CAS: 92045-24-4 | 100 | Carc. Cat. 3; R40 Xn; R20, R65 Xi; R38 N; R51/53 See Section 16 for the full text of the R-phrases declared above. | Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above. | [A] |

The mineral oils in the product contain < 3% DMSO extract (IP 346).

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

SECTION 3: Composition/information on ingredients

[A] Constituent

[B] Impurity

[C] Stabilizing additive

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

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 exposure to hydrogen sulphide is suspected or cannot be excluded, obtain medical attention IMMEDIATELY. 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 necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed**Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

SECTION 4: First aid measures**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

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

- Suitable extinguishing media** : Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
Hydrogen sulphide

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.
- 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

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.

SECTION 6: Accidental release measures

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

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). Hazardous concentrations of hydrogen sulphide (H₂S) gas may accumulate in the vapour space of storage vessels. Standard procedures for opening or entering tanks, vessels or other containers must strictly be followed to avoid inhalation of this acutely toxic gas. Do not breathe vapor or mist. Do not swallow. Avoid contact with eyes, skin and clothing. Avoid release to the environment. 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 explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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.

7.2 Conditions for safe storage, including any incompatibilities

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

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**

No exposure limit value known.

SECTION 8: Exposure controls/personal protection

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

No DELs available.

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls : Product may release hydrogen sulphide: a specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water and unintentional releases should be made to help determine controls appropriate to local circumstances. 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.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

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. Wear suitable gloves tested to EN374.

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.

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. [Viscous liquid.]

Appearance : Opaque.

Color : Brown.

Odor : Characteristic.

Odor threshold : Not available.

pH : 7

SECTION 9: Physical and chemical properties

| | |
|---|---|
| Melting point/freezing point | : >15°C |
| Initial boiling point and boiling range | : 230 to 450°C |
| Flash point | : Open cup: >110°C [ASTM D92.] |
| Evaporation rate | : Not available. |
| Flammability (solid, gas) | : Not available. |
| Upper/lower flammability or explosive limits | : Not available. |
| Vapor pressure | : 0.01 kPa [20°C] |
| Vapor density | : Not available. |
| Relative density | : 0.88 |
| Solubility(ies) | : Insoluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/water | : 4 to 6 |
| Auto-ignition temperature | : >220°C |
| Decomposition temperature | : Not available. |
| Viscosity (40°C) | : 17 cSt |
| Explosive properties | : Not applicable. |
| Oxidizing properties | : Not applicable. |

9.2 Other information

No additional information.

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 pressurize, 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 Strong oxidizing materials |
| 10.6 Hazardous decomposition products | : Decomposition products may include the following materials: sulfur oxides Hydrogen sulphide |

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitization

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Date of issue/Date of revision : 1/10/2012.

SECTION 11: Toxicological information

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|------------|-------------------|----------------|
| Gas oils (petroleum), hydrotreated light vacuum | Category 2 | Not determined | Not determined |

Aspiration hazard

| Product/ingredient name | Result |
|---|--------------------------------|
| Gas oils (petroleum), hydrotreated light vacuum | ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled.

Skin contact : Causes skin irritation. Defatting to the skin.

Ingestion : May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness
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

Not available.

Conclusion/Summary : Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

SECTION 11: Toxicological information

- Mutagenicity** : No known significant effects or critical hazards.
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.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|-----|-----------|
| Gas oils (petroleum), hydrotreated light vacuum | 4 to 6 | - | high |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not available.
P: Not available. B: Not available. T: Yes.

vPvB : Not available.
vP: Not available. vB: Not available.

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 minimized 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.

Hazardous waste : Yes.

European waste catalogue (EWC)

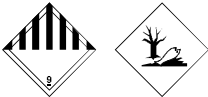
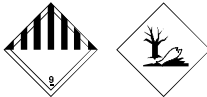
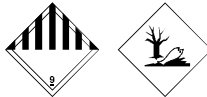
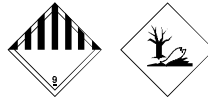
| Waste code | Waste designation |
|------------|---------------------|
| 05 01 05* | oil spills |
| 13 07 01* | fuel oil and diesel |

Packaging

SECTION 13: Disposal considerations

- Methods of disposal** : The generation of waste should be avoided or minimized 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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN/ADNR | IMDG | IATA |
|--|---|---|---|---|
| 14.1 UN number | UN3082 | UN3082 | UN3082 | UN3082 |
| 14.2 UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Gas oils (petroleum), hydrotreated light vacuum) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Gas oils (petroleum), hydrotreated light vacuum) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Gas oils (petroleum), hydrotreated light vacuum). Marine pollutant (Gas oils (petroleum), hydrotreated light vacuum) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Gas oils (petroleum), hydrotreated light vacuum) |
| 14.3 Transport hazard class(es) | 9  | 9  | 9  | 9  |
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. |
| 14.6 Special precautions for user | Not available. | Not available. | Not available. | Not available. |
| Additional information | <u>Tunnel code</u> (E) | - | - | - |

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 authorization

Substances of very high concern

None of the components are listed.

SECTION 15: Regulatory information

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

Other EU regulations

National Inventory List : **Australia inventory (AICS)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory: Not determined.
Korea inventory: This material is listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
United States inventory (TSCA 8b): Not determined.
Europe inventory: This material is listed or exempted.
Canada inventory: Not determined.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

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

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

International regulations

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

15.2 Chemical Safety Assessment : Not available.

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 |
|-------------------------|-----------------|
| Flam. Liq. 3, H226 | Expert judgment |
| Acute Tox. 4, H332 | Expert judgment |
| Skin Irrit. 2, H315 | Expert judgment |
| STOT RE 2, H373 | Expert judgment |
| Asp. Tox. 1, H304 | Expert judgment |
| Aquatic Chronic 2, H411 | Expert judgment |

SECTION 16: Other information

| | |
|---|---|
| Full text of abbreviated H statements | : H226 Flammable liquid and vapor. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H332 Harmful if inhaled. H373 May cause damage to organs through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects. |
| Full text of classifications [CLP/GHS] | : Acute Tox. 4, H332 ACUTE TOXICITY: INHALATION - Category 4 Aquatic Chronic 2, H411 AQUATIC TOXICITY (CHRONIC) - Category 2 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2 STOT RE 2, H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |
| Full text of abbreviated R phrases | : R40- Limited evidence of a carcinogenic effect. R20- Harmful by inhalation. R65- Harmful: may cause lung damage if swallowed. R38- Irritating to skin. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| Full text of classifications [DSD/DPD] | : Carc. Cat. 3 - Carcinogen category 3 Xn - Harmful Xi - Irritant N - Dangerous for the environment |
| Date of printing | : 1/10/2012. |
| Date of issue/ Date of revision | : 1/10/2012. |
| Date of previous issue | : No previous validation. |
| Version | : 1 |
| Prepared by | : Kuwait Petroleum Research & Technology B.V., The Netherlands |

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.