

SAFETY DATA SHEET

Full Range Naphtha - FRN



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

1.1 Product identifier

Product name : Full Range Naphtha - FRN
Material uses : Cracking feedstock and gasoline component
Index number : 649-265-00-X
EC number : 265-042-6
REACH Registration number

Registration number	Legal entity
01-2119474679-18	-

CAS number : 64741-42-0

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 : Multi-constituent substance

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

Flam. Liq. 1, H224
Skin Irrit. 2, H315
Muta. 1B, H340
Carc. 1B, H350
Repr. 2, H361fd
STOT SE 3, H336
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]

F+; R12
Repr. Cat. 3; R63
Xn; R65
Xi; R38
R67
N; R51/53

SECTION 2: Hazards identification

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 :

H224 Extremely flammable liquid and vapor.
 H315 Causes skin irritation.
 H340 May cause genetic defects.
 H350 May cause cancer.
 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
 H336 May cause drowsiness and dizziness.
 H304 May be fatal if swallowed and enters airways.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention :

P201 - Obtain special instructions before use.
 P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
 P280 - Wear protective gloves/clothing and eye/face protection.

Response :

P301 - IF SWALLOWED:
 P310 - Immediately call a POISON CENTER or doctor/physician.

Storage :

P403 - Store in a well-ventilated place.
 P233 - Keep container tightly closed.

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 :

No.
 PBT: Specified

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII :

No.
 vPvB: Specified

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.

SECTION 3: Composition/information on ingredients

Substance/mixture :

Multi-constituent substance

Full Range Naphtha - FRN

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Naphtha (petroleum), full-range straight-run	REACH #: 01-2119474679-18 EC: 265-042-6 CAS: 64741-42-0 Index: 649-265-00-X	100	F+; R12 Repr. Cat. 3; R63 Xn; R65 Xi; R38 R67 N; R51/53	Flam. Liq. 1, H224 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361fd STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[*]
toluene	EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	4.75	F; R11 Repr. Cat. 3; R63 Xn; R48/20, R65 Xi; R38 R67	Flam. Liq. 2, H225 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304	[A]
n-hexane	EC: 203-777-6 CAS: 110-54-3 Index: 601-037-00-0	3.37	F; R11 Repr. Cat. 3; R62 Xn; R48/20, R65 Xi; R38 R67 N; R51/53	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361f STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[A]
benzene	EC: 200-753-7 CAS: 71-43-2 Index: 601-020-00-8	0.76	F; R11 Carc. Cat. 1; R45 Muta. Cat. 2; R46 T; R48/23/24/25 Xn; R65 Xi; R36/38	Flam. Liq. 2, H225 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304	[A]
			See Section 16 for the full text of the R-phrases declared above.	See Section 16 for the full text of the H statements declared above.	

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

[*] Substance

[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.

SECTION 4: First aid measures

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

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

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. 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** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

SECTION 4: First aid measures

Ingestion : Adverse symptoms may include the following:
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

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, 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 : Extremely 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. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe 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".

SECTION 6: Accidental release measures

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.

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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. 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 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. Store locked up. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. Provide adequate ventilation.

SECTION 7: Handling and storage

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
toluene	EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values TWA: 192 MG/M3 8 hour(s). TWA: 50 PPM 8 hour(s). STEL: 384 MG/M3 15 minute(s). STEL: 100 PPM 15 minute(s).
n-hexane	EU OEL (Europe, 12/2009). Notes: list of indicative occupational exposure limit values TWA: 72 MG/M3 8 hour(s). TWA: 20 PPM 8 hour(s).
benzene	EU OEL (Europe, 12/2009). Absorbed through skin. TWA: 1 PPM 8 hour(s). TWA: 3.25 MG/M3 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

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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

SECTION 8: Exposure controls/personal 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.
- Appearance** : Clear.
- Color** : Colorless. [Light]
- Odor** : Characteristic.
- Odor threshold** : Not applicable.
- pH** : 7
- Melting point/freezing point** : <-50°C
- Initial boiling point and boiling range** : 25 to 184°C
- Flash point** : Closed cup: <-40°C [ASTM D56]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
- Upper/lower flammability or explosive limits** : Lower: 1.4%
Upper: 7.6%
- Vapor pressure** : 35.1 to 100.2 kPa [20°C]
- Vapor density** : >3 [Air = 1]
- Relative density** : 0.7
- Solubility(ies)** : Insoluble in the following materials: cold water and hot water.
- Dispersibility properties** : Not dispersible in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : >400°C
- Decomposition temperature** : >250°C
- Viscosity (40°C)** : <1 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. Do not allow vapor to accumulate in low or confined areas.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
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

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), full-range straight-run	LC50 Inhalation Vapor	Rat - Male, Female	>5610 mg/m ³	4 hours
toluene	LC50 Inhalation Vapor	Rat	49 g/m ³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
benzene	LD50 Oral	Rat	930 mg/kg	-

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Naphtha (petroleum), full-range straight-run	Skin - Edema	Rabbit	3	4 hours	72 hours
toluene	Eyes - Edema of the conjunctivae	Rabbit	0.33	4 hours	72 hours
	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
n-hexane	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
benzene	Eyes - Moderate irritant	Rabbit	-	88 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 15	-

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	Skin - Moderate irritant	Rabbit	-	milligrams 24 hours 20 milligrams	-
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Conclusion/Summary : Not available.

Sensitization

Conclusion/Summary : Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Naphtha (petroleum), full-range straight-run	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	475 Mammalian Bone Marrow Chromosomal Aberration Test	Experiment: In vivo Subject: Mammalian-Animal	Negative

Conclusion/Summary : Not available.

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), full-range straight-run	Positive - Dermal - TC	Mouse - Male	5 mg/kg	102 weeks; 3 days per week

Conclusion/Summary : Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Naphtha (petroleum), full-range straight-run	Negative	Negative	Negative	Rat - Male, Female	Inhalation: ≥20000 mg/m ³	7 weeks; 6 hours per day

Conclusion/Summary : Not available.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), full-range straight-run	Negative - Inhalation	Rat	23900 mg/m ³	20 days; 6 hours per day

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Naphtha (petroleum), full-range straight-run toluene n-hexane	Category 3	Not determined	Narcotic effects
	Category 3	Not determined	Narcotic effects
	Category 3	Not determined	Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
toluene n-hexane benzene	Category 2	Not determined	Not determined
	Category 2	Not determined	Not determined
	Category 1	Not determined	Not determined

Aspiration hazard

Product/ingredient name	Result
Naphtha (petroleum), full-range straight-run toluene n-hexane benzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated:Inhalation.
Routes of entry not anticipated:Oral, Dermal.

Potential acute health effects

SECTION 11: Toxicological information

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. 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** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

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

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), full-range straight-run	Sub-acute NOEL Oral	Rat - Male	<500 mg/kg	28 days; 5 days per week
	Sub-acute NOAEL Dermal	Rat - Male, Female	375 mg/kg	28 days; 5 days per week
	Sub-chronic NOAEL Inhalation Vapor	Rat - Male, Female	10000 mg/m ³	90 days; 5 days per week

- Conclusion/Summary** : Not available.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : May cause genetic defects.
- Teratogenicity** : Suspected of damaging the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : Suspected of damaging fertility.

SECTION 11: Toxicological information

Metabolism : Rapidly metabolized.
Elimination : Excreted via the urine.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Naphtha (petroleum), full-range straight-run	Acute EC50 3.7 mg/l Fresh water	Algae	96 hours
toluene	Acute EC50 4.5 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 10 mg/l Fresh water	Fish	96 hours
	Chronic NOEC 2.6 mg/l Fresh water	Fish	14 days
	Acute EC50 12500 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
n-hexane	Acute EC50 11600 ug/L Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult - 9 mm - 0.017 g	48 hours
	Acute EC50 6000 ug/L Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 ug/L Fresh water	Fish - Oncorhynchus kisutch - Fry - 1 g	96 hours
benzene	Chronic NOEC 1000 ug/L Fresh water	Daphnia - Daphnia magna - <=24 hours	21 days
	Acute LC50 2500 ug/L Fresh water	Fish - Pimephales promelas - 31 days - 20.4 mm - 0.123 g	96 hours
	Acute EC50 29000 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 >1360000 ug/L Fresh water	Algae - Scenedesmus abundans	96 hours
	Acute EC50 9230 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <=24 hours	48 hours
	Acute LC50 21000 ug/L Marine water	Crustaceans - Artemia salina - Nauplii	48 hours
benzene	Acute LC50 5.28 ul/L Fresh water	Fish - Oncorhynchus gorbuscha - Fry	96 hours
	Chronic NOEC 1.5 to 5.4 ul/L Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling) - 18.1 cm - 3.39 g	4 weeks

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
toluene	2.69	-	low
n-hexane	3.9	-	high
benzene	2.13	-	low

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

SECTION 12: Ecological information

PBT : No.
PBT: Specified

vPvB : No.
vPvB: Specified

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
13 07 02*	gasoline

Packaging

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	UN1268	UN1268	UN1268	UN1268
14.2 UN proper shipping name	PETROLEUM DISTILLATES, N.O.S.	PETROLEUM DISTILLATES, N.O.S.	PETROLEUM DISTILLATES, N.O.S.	Petroleum distillates, n.o.s.
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	I	I	I	I
14.5 Environmental hazards	No.	Yes.	No.	No.
14.6 Special precautions for user	Not available.	Not available.	Not available.	Not available.

Full Range Naphtha - FRN

SECTION 14: Transport information

Additional information	Hazard identification number 33	-	Emergency schedules (EmS) F-E, S-E	Passenger and Cargo Aircraft Quantity limitation: 1 L Packaging instructions: 302
	Limited quantity LQ3		Cargo Aircraft Only Quantity limitation: 30 L Packaging instructions: 303	
	Special provisions 649			
	Tunnel code D/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.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Other EU regulations

National Inventory List : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: 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.
Europe inventory: All components are listed or exempted.
Canada inventory: All components are listed or exempted.

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
Naphtha (petroleum), full-range straight-run	Carc. 1B, H350	Muta. 1B, H340	Repr. 2, H361d	Repr. 2, H361f
toluene	-	-	Repr. 2, H361d	-
n-hexane	-	-	-	Repr. 2, H361f
benzene	Carc. 1A, H350	Muta. 1B, H340	-	-

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

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
Flam. Liq. 1, H224	Expert judgment
Skin Irrit. 2, H315	Expert judgment
Muta. 1B, H340	Expert judgment
Carc. 1B, H350	Expert judgment
Repr. 2, H361fd	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 : H224 Extremely flammable liquid and vapor.
 H225 Highly flammable liquid and vapor.
 H302 Harmful if swallowed.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness and dizziness.
 H340 May cause genetic defects.
 H350 May cause cancer.
 H361d Suspected of damaging the unborn child.
 H361f Suspected of damaging fertility.
 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
 H372 Causes damage to organs through prolonged or repeated exposure.
 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, H302 ACUTE TOXICITY: ORAL - Category 4
 Aquatic Chronic 2, H411 AQUATIC TOXICITY (CHRONIC) - Category 2
 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1
 Carc. 1A, H350 CARCINOGENICITY - Category 1A
 Carc. 1B, H350 CARCINOGENICITY - Category 1B
 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
 Flam. Liq. 1, H224 FLAMMABLE LIQUIDS - Category 1
 Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2
 Muta. 1B, H340 GERM CELL MUTAGENICITY - Category 1B
 Repr. 2, H361d TOXIC TO REPRODUCTION [Unborn child] - Category 2
 Repr. 2, H361f TOXIC TO REPRODUCTION [Fertility] - Category 2
 Repr. 2, H361fd TOXIC TO REPRODUCTION [Fertility and Unborn child] -

SECTION 16: Other information

Category 2	
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
STOT RE 1, H372	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3

Full text of abbreviated R phrases	: R12- Extremely flammable. R11- Highly flammable. R45- May cause cancer. R46- May cause heritable genetic damage. R62- Possible risk of impaired fertility. R63- Possible risk of harm to the unborn child. R48/23/24/25- Also toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. R48/20- Also harmful: danger of serious damage to health by prolonged exposure through inhalation. R65- Also harmful: may cause lung damage if swallowed. R38- Irritating to skin. R36/38- Irritating to eyes and skin. R67- Vapors may cause drowsiness and dizziness. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications [DSD/DPD]	: F+ - Extremely flammable F - Highly flammable Carc. Cat. 1 - Carcinogen category 1 Muta. Cat. 2 - Mutagen category 2 Repr. Cat. 3 - Toxic to reproduction category 3 T - Toxic Xn - Harmful Xi - Irritant N - Dangerous for the environment
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Prepared by	: Kuwait Petroleum Research & Technology B.V., The Netherlands

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