

# SAFETY DATA SHEET



BENZENE HEARTCUT (SINGAPORE)

This SDS is a document with no country specific information included.

## Section 1. Identification

**Product name** : BENZENE HEARTCUT (SINGAPORE)

**Product description** : Aromatic Hydrocarbon

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

**Identified uses** : Chemical feedstock

**Uses advised against** : This product is not recommended for any industrial, professional or consumer use other than the identified uses above.

**Supplier** : ExxonMobil Chemical Asia Pacific (Regn. No. 52893724C)  
(A Division Of ExxonMobil Asia Pacific Pte Ltd - Regn. No. 196800312N)  
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**Supplier General Contact** : +65 6885 8000

**Local Emergency telephone number** : CHEMTREC International: +1-703-741-5970  
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China: 400 120 4937  
India: 000-800-100-7141  
Japan: 0800-300-5842  
Malaysia: 1-800-815-308  
New Zealand: 0800-425-459  
Philippines: 1-800-1-116-1020  
Republic of Korea: 080-880-0468  
Taiwan: 00801-14-8954  
Thailand: 001-800-13-203-9987

## Section 2. Hazard identification

This material is hazardous according to UN GHS Criteria. Classification includes all GHS hazard classes. For hazard categories with two cut-off/concentration limits, classification was based on the higher limit.

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY (oral) - Category 5  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  
GERM CELL MUTAGENICITY - Category 1B  
CARCINOGENICITY - Category 1B  
TOXIC TO REPRODUCTION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1  
ASPIRATION HAZARD - Category 1  
AQUATIC HAZARD (ACUTE) - Category 2  
AQUATIC HAZARD (LONG-TERM) - Category 2

### GHS label elements

## Section 2. Hazard identification

### Hazard pictograms



### Signal word

: Danger

### Hazard statements

: H225 - Highly flammable liquid and vapor.  
 H303 - May be 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 or dizziness.  
 H340 - May cause genetic defects.  
 H350 - May cause cancer.  
 H361 - Suspected of damaging fertility or the unborn child.  
 H372 - Causes damage to organs through prolonged or repeated exposure. (blood, central nervous system (CNS))  
 H411 - Toxic to aquatic life with long lasting effects.

### Precautionary statements

#### Prevention

: P201 - Obtain special instructions before use.  
 P202 - Do not handle until all safety precautions have been read and understood.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P240 - Ground and bond container and receiving equipment.  
 P241 - Use explosion-proof electrical, ventilating or lighting equipment.  
 P242 - Use non-sparking tools.  
 P243 - Take action to prevent static discharges.  
 P260 - Do not breathe vapor.  
 P264 - Wash thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P273 - Avoid release to the environment.  
 P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

#### Response

: P301 + P331, P310 - IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.  
 P302 + P352 - IF ON SKIN: Wash with plenty of water.  
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 P304 + P312, P340 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Remove person to fresh air and keep comfortable for breathing.  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308 + P313 - IF exposed or concerned: Get medical advice or attention.  
 P332 + P313 - If skin irritation occurs: Get medical advice/attention.  
 P337 + P313 - If eye irritation persists: Get medical advice/attention.  
 P362 + P364 - Take off contaminated clothing and wash it before reuse.  
 P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish.  
 P391 - Collect spillage.

#### Storage

: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.  
 P403 + P235 - Keep cool.  
 P405 - Store locked up.

#### Disposal

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

### Contains

: naphtha (petroleum), light steam-cracked

### Other hazards which do not result in classification

: None known.

## Section 2. Hazard identification

**Note** : This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Substance

**Chemical name** : naphtha (petroleum), light steam-cracked

Ingredient name	% by weight	Identifiers
naphtha (petroleum), light steam-cracked	100	CAS: 64742-83-2
benzene	<90	CAS: 71-43-2
toluene	<20	CAS: 108-88-3
heptane and isomers	5 - 10	Proprietary
n-hexane	5 - 10	CAS: 110-54-3
naphthalene	<2.5	CAS: 91-20-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

## Section 4. First-aid measures

### Description of necessary 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 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** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 10 minutes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Get medical attention.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

## Section 4. First-aid measures

- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : May be harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### 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  
Numbness, muscle cramps, weakness and paralysis that may be delayed.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. This material, or a component, may be associated with cardiac sensitization following very high exposures (well above occupational exposure limits) or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine. Administration of such substances should be avoided.
- Specific treatments** : No specific treatment.
- 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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 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.

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. 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. 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 combustion products** : Incomplete combustion products, Oxides of carbon, Smoke, Fume

## Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Use standard firefighting procedures and consider the hazards of other involved materials. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Assure an extended cooling down period to prevent re-ignition. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. No action shall be taken involving any personal risk or without suitable training.
- 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.

## Section 6. Accidental release measures

### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

### 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. Put on appropriate personal protective equipment. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
- For emergency responders** : If specialized 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".
- 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.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. Seek the advice of a specialist before using dispersants. Warn other shipping. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: Put on appropriate personal protective equipment (see Section 8). 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 breathe vapor or mist. Do not swallow. 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. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
<b>Advice on general occupational hygiene</b>	: 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.
<b>Static Accumulator</b>	: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.
<b>Loading/Unloading Temperature</b>	: Ambient
<b>Transport Temperature</b>	: Ambient
<b>Transport Pressure</b>	: Ambient
<b>Conditions for safe storage, including any incompatibilities</b>	: 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. See Section 10 for incompatible materials before handling or use.
<b>Storage Temperature</b>	: Ambient
<b>Storage Pressure</b>	: Ambient
<b>Suitable Containers/Packing</b>	: Tankers, Barges, Tank Trucks, Railcars
<b>Suitable Materials and Coatings</b>	: steel, Inorganic Zinc Coatings, Epoxy Phenolics, polypropylene, Fluorinated Silicone Rubber, Nylon 66
<b>Unsuitable Materials and Coatings</b>	: Vinyl Coatings, Epoxy Resin-Aluminum Combinations, Natural Rubber, Synthetic Rubber, polyethylene



## Section 8. Exposure controls/personal protection

### [Control parameters](#)

#### [Occupational exposure limits](#)

Ingredient name	Exposure limits
benzene	<b>ACGIH TLV (United States, 1/2024)</b> Absorbed through skin. TWA 8 hours: 0.02 ppm. <b>ExxonMobil (COMPANY)</b> Absorbed through skin. STEL 15 minutes: 1 ppm. TWA 8 hours: 0.2 ppm.
toluene	<b>ACGIH TLV (United States, 1/2024)</b> Ototoxicant. TWA 8 hours: 20 ppm.
n-hexane	<b>ACGIH TLV (United States, 1/2024)</b> Absorbed through skin. TWA 8 hours: 50 ppm.
naphthalene	<b>ACGIH TLV (United States, 1/2024)</b> Absorbed through skin. TWA 8 hours: 10 ppm. TWA 8 hours: 52 mg/m <sup>3</sup> .

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

#### [Biological exposure indices](#)

Ingredient name	Exposure indices
benzene	<b>ACGIH BEI (United States, 1/2024)</b> BEI: 25 µg/g creatinine, S-phenylmercapturic acid [in urine]. Sampling time: end of shift. BEI: 500 µg/g creatinine, t,t-muconic acid [in urine]. Sampling time: end of shift.
toluene	<b>ACGIH BEI (United States, 1/2024)</b> BEI: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift. BEI: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift. BEI: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek.
n-hexane	<b>ACGIH BEI (United States, 1/2024)</b> BEI: 0.5 mg/l, 2,5-hexanedion [in urine]. Sampling time: end of shift.
naphthalene	<b>ACGIH BEI (United States, 1/2024)</b> BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 1-naphthol + 2-naphthol [(sample not specified)]. Sampling time: end of shift.

#### [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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### [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.

#### [Individual protection measures](#)

## Section 8. Exposure controls/personal protection

- 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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): Nitrile, minimum 0.38 mm thickness or comparable protective barrier material
- 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapor filter (Type A)

## Section 9. Physical and chemical properties and safety characteristics

**Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : Liquid. [Clear]
- Color** : Pale yellow
- Odor** : Aromatic
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : <-9°C (<15.8°F)
- Boiling point or initial boiling point and boiling range** : 35 to 140°C (95 to 284°F)
- Flash point** : Closed cup: -11°C (12.2°F) [ASTM D-56]
- Evaporation rate** : Not available.
- Flammability** : Flammable liquids - Category 2
- Lower and upper explosion limit/flammability limit** : Lower: 1.2%  
Upper: 10%



## Section 9. Physical and chemical properties and safety characteristics

**Vapor pressure** : 148.51 mm Hg [20 °C]  
272.27 mm Hg [40 °C]  
315.03 mm Hg [50 °C]

**Relative vapor density** : >1 [Air = 1]

**Relative density** : 0.82

**Solubility in water** : Negligible

**Partition coefficient n-octanol/water (log Pow)** : Not applicable.

**Auto-ignition temperature** : >250°C (>482°F)

**Decomposition temperature** : Not available.

**Viscosity** : 0.42 cSt

### Particle characteristics

**Median particle size** : Not applicable.

**Coefficient of Thermal Expansion** : 0.00111 per Deg C

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**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.

**Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials,

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Test	Species	Result	Duration
naphthalene	LC50 Inhalation Vapor LD50 Oral	Rat Mouse	>0.4 mg/l 533 mg/kg	4 hours -

#### Conclusion/Summary

**Inhalation** : Minimally Toxic. No end point data for material. Based on assessment of the components.

**Dermal** : Minimally Toxic. No end point data for material. Based on assessment of the components.

**Oral** : Minimally Toxic. No end point data for material. Based on assessment of the components.

#### Irritation/Corrosion

#### Conclusion/Summary

**Skin** : Irritating to the skin. No end point data for material. Based on assessment of the components.

## Section 11. Toxicological information

- Eyes** : Irritating and will injure eye tissue. No end point data for material. Based on assessment of the components.
- Respiratory** : Negligible hazard at ambient/normal handling temperatures. No end point data for material. Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.

### Respiratory or skin sensitization

#### Conclusion/Summary

- Skin** : Not expected to be a skin sensitizer. No end point data for material. Based on assessment of the components.
- Respiratory** : Not expected to be a respiratory sensitizer. No end point data for material.

### Mutagenicity

- Conclusion/Summary** : May cause genetic defects. No end point data for material. Based on assessment of the components.

### Carcinogenicity

- Conclusion/Summary** : May cause cancer. No end point data for material. Based on assessment of the components.

### Classification

Product/ingredient name	IARC
benzene	1
toluene	3

### Reproductive toxicity

- Conclusion/Summary** : May damage fertility. May damage the unborn child. No end point data for material. Based on assessment of the components.

### Specific target organ toxicity (single exposure)

- Conclusion/Summary** : May cause drowsiness or dizziness. No end point data for material.

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Target organs
naphtha (petroleum), light steam-cracked	Category 1	blood, central nervous system (CNS)

- Conclusion/Summary** : May cause damage to organs through prolonged or repeated exposure. No end point data for material. Based on assessment of the components.

### Aspiration hazard

- Conclusion/Summary** : May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material. Data available.

### Other information

- Contains** : NAPHTHALENE: Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anemia, and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain. BENZENE: Caused cancer (acute myeloid leukemia and myelodysplastic syndrome), damage to the blood-producing system, and serious blood disorders in human studies. Caused genetic effects and effects on the immune system in laboratory animal and some human studies. Caused toxicity to the fetus and cancer in laboratory animal studies. N-HEXANE: Prolonged and/or repeated exposures to n-Hexane can cause progressive and potentially irreversible damage to the peripheral nervous system (e.g. fingers, feet, arms, legs, etc.). Simultaneous exposure to Methyl Ethyl Ketone (MEK) or Methyl Isobutyl Ketone (MIBK) and n-Hexane can potentiate the risk of adverse effects from n-Hexane on the peripheral nervous system. n-Hexane has been shown to cause testicular damage at high doses in male rats. The relevance of this effect for humans is unknown. Contains hexane; individuals with pre-existing neurological disease should avoid exposure. TOLUENE : Concentrated, prolonged or deliberate inhalation may cause brain and nervous system damage. Prolonged and repeated exposure of pregnant animals (> 1500 ppm) have been reported to cause adverse fetal developmental effects.

## Section 11. Toxicological information

- Product** : High vapor/aerosol concentrations (attainable at elevated temperatures well above ambient) are irritating to the eyes and respiratory tract and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects. Exposure to this material, or one of its components, in situations where there is the potential for high levels, such as in confined spaces or with abuse, may result in abnormal heart rhythm (arrhythmia). High-level exposure to hydrocarbons (above occupational exposure limits) may initiate arrhythmia in a worker that is undergoing stress or is taking a heart-stimulating substance such as epinephrine, a nasal decongestant, or an asthma or cardiovascular drug. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

## Section 12. Ecological information

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

### Toxicity

#### Conclusion/Summary

- Acute toxicity** : Toxic to aquatic life.  
**Chronic toxicity** : Toxic to aquatic life with long lasting effects.

### Persistence and degradability

- Biodegradability** : Components -- Expected to be inherently biodegradable Majority of components -- Expected to be readily biodegradable.  
**Atmospheric Oxidation** : Components -- Expected to degrade rapidly in air Majority of components -- Expected to degrade at a moderate rate in air

### Bioaccumulative potential

#### Conclusion/Summary

- : Components -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability. Majority of components -- Potential to bioaccumulate is low.

### Mobility in soil

- Mobility** : Majority of components -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

### Other ecological information

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




## Section 13. Disposal considerations

- Disposal methods** : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT,

## Section 13. Disposal considerations

WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

## Section 14. Transport information

	ADR	IMDG	IATA
UN number	UN1268	UN1268	UN1268
UN proper shipping name	PETROLEUM DISTILLATES, N.O.S.	PETROLEUM DISTILLATES, N.O.S.	Petroleum distillates, n.o.s.
Transport hazard class(es)	3	3	3
Label(s) / Mark(s)			
Packing group	II	II	II
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

#### ADR

- : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**Hazard identification number** 33

**Limited quantity** 1 L

**Special provisions** 640D, 664

**Tunnel code** (D/E)

#### IMDG

- : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**Emergency schedules** F-E, S-E

Flash point -11 °C C.C.

#### IATA

- : The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.

**Special provisions** A3

### Special precautions for user

- : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Transport in bulk according to IMO instruments

#### Proper shipping name

- : BENZENE AND MIXTURES HAVING 10% BENZENE OR MORE

#### Remarks

- : **Liquid bulk cargoes**

Ship type: 3

Pollution category: Y

## Section 15. Regulatory information

This material is hazardous according to UN GHS Criteria.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia inventory (AIIIC)</b>	: All components are listed or exempted.
<b>Canada inventory (DSL-NDSL)</b>	: Restrictions Apply
<b>China inventory (IECSC)</b>	: Not determined.
<b>Japan inventory (CSCL)</b>	: Not determined.
<b>Japan inventory (Industrial Safety and Health Act)</b>	: Not determined.
<b>New Zealand Inventory of Chemicals (NZIoC)</b>	: Not determined.
<b>Philippines inventory (PICCS)</b>	: Not determined.
<b>Korea inventory (KECI)</b>	: All components are listed or exempted.
<b>Taiwan Chemical Substances Inventory (TCSI)</b>	: All components are listed or exempted.
<b>United States inventory (TSCA 8b)</b>	: All components are active or exempted.

## Section 16. Other information

### History

<b>Date of issue/Date of revision</b>	: 2 August 2024
<b>Date of previous issue</b>	: 5 January 2024
<b>Version</b>	: 1.01
<b>Key to abbreviations</b>	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations

### Procedure used to derive the classification

Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	Expert judgment
ACUTE TOXICITY (oral) - Category 5	Expert judgment
SKIN CORROSION/IRRITATION - Category 2	Expert judgment
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2	Expert judgment
GERM CELL MUTAGENICITY - Category 1B	Expert judgment
CARCINOGENICITY - Category 1B	Expert judgment
TOXIC TO REPRODUCTION - Category 2	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Expert judgment
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 2	Expert judgment
AQUATIC HAZARD (LONG-TERM) - Category 2	Expert judgment

**References** : Not available.

Indicates information that has changed from previously issued version.

**Product code** : 1146724

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