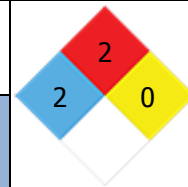




# Safety Data Sheet

## Gas oil



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### 1 Identification of the substance or mixture and of the supplier

#### 1.1. Product name or GHS product identifier

1.1.1. Common name :	Gas oil
1.1.2. Chemical formula :	
1.1.3. Commercial name :	Fuels, diesel
1.1.4. CAS number :	68334-30-5
1.1.5. Molecular weight :	

#### 1.2. Other product identifier :

1.2.1. UN Number :	1202
1.2.2. Annex I, EU directive 67/948/EC :	269-822-7
1.2.3. EC number :	269-822-7

#### 1.3. Recommendation for use and other prohibitions for use

Use as fuel

#### 1.4. Manufacturer or Supplier Details

1.4.1. Manufacturer or Supplier	1.4.2. Address
PTT Global Chemical Public Company Limited	8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong, Rayong 21150 Thailand.
1.4.3. Telephone number :	66(0) 3897-1000 ext. 1190,1191
1.5. Emergency telephone number :	038-971191

#### 1.6. Other information

1.6.1. Hazardous substance	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
1.6.2. Hazardous category	Hazard type 1	
1.6.3. Max quantity storage	-	

#### 1.6.4. Uses

Use as fuel

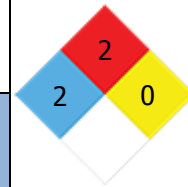
#### 1.6.5. Other

No data available



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## Gas oil



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### Hazards identification

#### 2.1. GHS classification of the substance/mixture and any national or regional information

##### 2.1.1. Hazard classification according to the GHS

Flammable liquids - Category 3  
Acute Toxicity: Inhalation - Category 4  
Skin Corrosion/Irritation - Hazard category 2 Irritant  
Carcinogenicity - Hazard category 2  
Specific Target Organ Toxicity (Repeated Exposure) - Category 2  
Aspiration Hazard - Hazard category 1  
Long Term Hazards To The Aquatic Environments - Hazard category 2

#### 2.2. GHS label elements, including precautionary statements

##### 2.2.1. Chemical name :

##### 2.2.2. Product name or GHS product identifier :

Gas oil

##### 2.2.3. Symbol and Hazard pictograms



##### 2.2.4. Signal words :

Danger

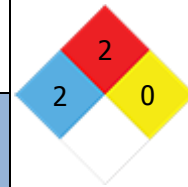
##### 2.2.5. Hazard statement

Flammable liquid and vapour  
Harmful if inhaled  
Causes skin irritation  
Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)  
May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)  
May be fatal if swallowed and enters airways  
Toxic to aquatic life with long lasting effects



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## Gas oil



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### Hazards identification (cont.)

#### 2.2.6. Precautionary information

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Ground/Bond container and receiving equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid breathing vapours
- Avoid release to the environment.

#### 2.2.7. Supplemental information

N/A

#### 2.3. Other hazards which do not result in classification or are not covered by the GHS

N/A

#### 2.3.1. Potential Chronic Health Effects

##### 2.3.1.1. Carcinogen effects

Maybe-Carcinogen     Carcinogen     Non-Carcinogen     N/A

maybe carcinogen

##### 2.3.1.2. Mutagenic effects

Mutagenic     Non-Mutagenic     N/A

N/A

##### 2.3.1.3. Other information

N/A

#### 2.4. Environmental Hazards

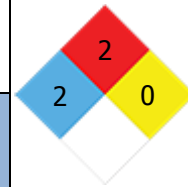
Toxic to aquatic life with long lasting effects.





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### 4

### First-aid measures

#### 4.1. First-aid

##### 4.1.1. Inhalation

Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

##### 4.1.2. Skin contact

Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

##### 4.1.3. Eyes contact

Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

##### 4.1.4. Ingestion

If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 38 °C, shortness of breath, chest congestion or continued coughing or wheezing. Give nothing by mouth.

#### 4.2. Most important symptoms/effects

##### 4.2.1. Acute Effects

N/A

##### 4.2.2. Delayed effects

N/A

#### 4.3. Indication of immediate medical attention

N/A

#### 4.4. Special treatment needed, if necessary.

Treat symptomatically.

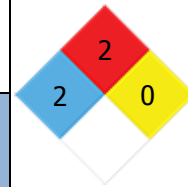
#### 4.5. Other

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. The onset of respiratory symptoms may be delayed for several hours after exposure.



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### 5

### Firefighting measures

5.1. Unsuitable extinguishing media :

Do not use water in a jet. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2. Suitable extinguishing media :

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

5.3. Specific hazards arising from the chemical.

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke) . Carbon monoxide. Oxides of sulphur. Unidentified organic and inorganic compounds. Carbon monoxide ma

5.4. Special protective equipment and precautions for fire-fighters.

Wear full protective clothing and self-contained breathing apparatus

5.5. Precautions for fire fighters.

N/A

5.6. Other.

N/A

### 6

### Accidental release measures

6.1. Personal precautions

Do not breathe fumes, vapour. Do not operate electrical equipment.

6.2. Protective equipment



6.3. Emergency procedures

6.3.1. Large Spill

For large liquid spills, transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Absorb with a suitable absorbent material and dispose of safely. R

6.3.2. Small Spill

For small liquid spills, transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Absorb with a suitable absorbent material and dispose of safely. Remove contaminated soil and dispose

6.4. Environmental precautions

Prevent entry into sewers and waterways.

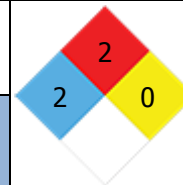
6.5. Methods and materials for containment and cleaning up.

Stop leak if you can do it without risk. Use non-sparking tools and explosion-proof equipment. Absorb spill with dry earth, sand or other suitable inert absorbent material then place in a container for chemical waste. Clean surface thoro



# Safety Data Sheet

## Gas oil



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### 7

### Handling and storage

#### 7.1. Precautions for safe handling.

Avoid inhaling vapour and/or mists. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Earth all equipm

#### 7.2. Incompatibility.

##### 7.2.1. Safe storage condition.

Tank storage: Tanks must be specifically designed for use with this product. Bulk storage tanks should be diked (bunded) . Locate tanks away from heat and other sources of ignition. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. The vapour is heavier than air. Bewar

##### 7.2.2. Incompatible chemicals condition.

N/A

#### 7.3. Storage area :

GC6

#### 7.4. Incompatible chemicals condition.

N/A

#### 7.5. Hazard Class by UN :

3

#### 7.6. Classification :

### 8

### Exposure controls/personal protection

#### 8.1. Occupational exposure limit values or biological limit values

Name	TLV-TWA	TLV-STEL	TLV-C	PEL	IDLH	Thai	biological limit values

#### 8.2. Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use explosion-proof equipment.

#### 8.3. Personal protective equipment



#### 8.4. Personal hygiene

When using, do not eat, drink or smoke. Wash hands after handling. Launder contaminated clothing before reuse.

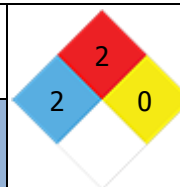
#### 8.5. Other protection

N/A



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### Physical and chemical properties

9.1. Appearance :	Liquid colourless, yellow or green		
9.2. Odour :	Characteristic		
9.3. Odour threshold limit :	N/A ppm		
9.4. pH-value :	N/A		
9.5. Melting point &Freezing point :	Melting point	N/A °C	
	Freezing point	N/A °C	
9.6. Initial boiling point/Boiling range	Boiling/condensation point	163 °C	
	Evaporation rate	163 °C – 357 °C	
9.7. Flash point :	>56 °C (Close cup)		
9.8. Evaporation rate :	N/A mg/sec		
9.9. Flammability (solid, gas) :	Burning time	N/A sec	
	Burning Rate	N/A mm/sec	
9.10. Upper/lower flammability or explosive limits :	0.6 % LEL and/or 7.5 %UEL		
9.11. Vapour pressure :	<1 kPa at 20 °C		
9.12. Vapour density :	Respect to air	- kPa	
9.13. Relative density :	N/A g/cm3 or kg/m3 at		
9.14. Solubility(ies) :	N/A		
9.15. Partition coefficient : n-octanol/water :	2.66-6.0		
9.16. Auto-ignition temperature :	225-230 °C		
9.17. Decomposition temperature :	N/A °C		
9.18. Viscosity :	1.8 - 4 mm <sup>2</sup> /s at 40 °C		
9.19. Heat of Combustion :	N/A °C		
9.20. The ignition distance test :	N/A cm		
9.21. The enclosed space ignition test	N/A s/m <sup>3</sup>		
9.22. The foam test :	Vapor density	N/A	cm
	Flames burning up	N/A	sec

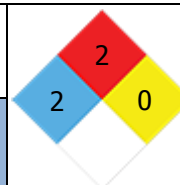
Detail	Type of Substance		Unit
	Other substance	Powders or dusts	
Use water spray to blanket fire, cool fire exposed containers, to stop leak, and burn	N/A	-	minute
Burning time	N/A	-	sec
Burning rate	N/A	-	mm/s





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## Gas oil



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### 10

### Stability and reactivity

#### 10.1. Reactivity

The product is not considered to be reactive.

#### 10.2. Chemical Stability :

- Stability       Instability and emit gas       N/A

#### 10.3. Possibility of Hazardous reaction :

Under normal conditions of storage and use, there are no dangerous reactions.

#### 10.4. Conditions to avoid :

Avoid heat, sparks, open flames and other ignition sources.

#### 10.5. Incompatible materials :

Strong oxidising agents.

#### 10.6. Hazardous decomposition products :

Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent

#### 10.7. Corrosively :

N/A

### 11

### Toxicological information

11.1. Route of Exposure     Inhalation     Ingestion     Skin contact     Eye contact

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

##### 11.2.1. Symptom related with physical characteristic

Inhalation of vapours may cause irritation to the respiratory system. High concentration of vapours may induce: headache, nausea, dizziness.

##### 11.2.2. Symptom related with chemical characteristic

N/A

##### 11.2.3. Symptom related with toxicology

N/A

#### 11. The impact of acute and delayed (delayed and immediate effects) including chronic (chronic effects) exposure (Contact delayed, immediate and chronic effects)

Irritating to skin. Inhalation of vapours or mists may cause irritation to the respiratory system

#### 11.4. Numerical measures of toxicity

11.4.1. Acute oral toxicity :      LD50 Oral - rat : 17.900 mg/kg

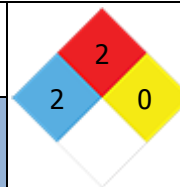
11.4.2. Acute dermal toxicity :      LD50 Dermal - rabbit : > 4.300 mg/kg

11.4.3. Acute toxic of the vapour :      LC50 Inhalation - rat : 5.6 mg/l 4 h



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### 12

#### Ecological information

12.1. Eco toxicity (aquatic and terrestrial, where available)

12.1.1. Toxicity to fish : Fish (Oncorhynchus mykiss) LC50: 21 mg/l, 96 hours

12.1.2. Crustaceans / Toxicity to crustaceans : Crustacean (Daphnia magna) EC50: >5,000 mg/l, 48 h

12.1.3. Algae / Toxicity to algae : Algae (Pseudokirchneriella subcapitata) EC50: 10 mg/l,

12.2. Degradability and persistence

Information given is based on knowledge of the components and the ecotoxicology of similar products.

12.3. Bio-accumulative potential : Log Kow : 2.66-6.0

12.4. Mobility in soil : Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day. If product enters soil, one or more constituents will be m

12.5. Other adverse effects :

Films formed on water may affect oxygen transfer and damage organisms.

### 13

#### Disposal considerations

13.1. Waste information : N/A

13.2. Remain materials : N/A

13.3. Waste disposal : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and dis

13.4. Package contaminated disposal : Send to drum recoverer or metal reclaimer. Drain container thoroughly. After draining, vent in a safe place away from sparks and f

### 14

#### Transport information

14.1. UN Number : 1202

14.2. UN Proper Shipping Name : GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT

14.3. Transport Class/Division : 3

14.4. Package group (if any) : III

14.5. Marine pollution :  Yes  No  N/A

14.6. Special precautionary for user : N/A

14.7. Transport in bulk : n/a

14.8. Classification code : F1

14.9. Other :

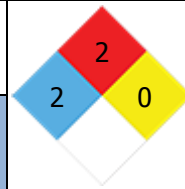
#### Pictogram





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### 15

#### Regulatory information

##### 15.1. Safety, health and environmental regulations

Local regulations may be more stringent than regional or national requirements and must be complied with.

### 16

#### Regulatory information

##### 16.1. Date of latest issue

23/8/2018

##### 16.2. Description of point of Safety Data Sheet changing

##### 16.3. Abbreviation explanation

NFPA Hazard Code	HMIS Hazard	Rating System
Hazardous decomposition products  Health hazard Possibility of hazardous reactions Specific hazards arising from the chemical	2 Health	0 = No hazard 1 = Slight hazard 2 = Moderate hazard 3 = Serious hazard 4 = Severe hazard
	2 Flammability	
	0 Reactivity	

##### 16.4. Information Safety Data Sheet files

Primary Reference : [Gas oil Eng.pdf](#)

Secondary Reference :

##### 16.5. Local Legislation Related

thal laws

##### 16.6. Reference

##### 16.7. Other details

N/A

# Gas oil

## NFPA Rating



## Emergency Call

038-971191

UN Number : 1202 CAS Number : 68334-30-5

Flash point : >56°C Auto-ignition : 225-230°C

TWA-TLV : Classification : F1

## Hazard Statement

- " Danger Flammable liquids "
- Acute Toxicity: Inhalation-Category 4
- Skin Corrosion/Irritation-Hazard category 2 Irritant
- Carcinogenicity-Hazard category 2
- Specific Target Organ Toxicity Category 2
- Aspiration Hazard-Hazard category 1
- Long Term Hazards To The Aquatic Environments-Hazar



## Health Effects

- Harmful if inhaled
  - Causes skin irritation
  - Suspected of causing cancer
  - May cause damage to organs
  - May be fatal if swallowed and enters airways
- \*\* Symptom : Inhalation of vapours may cause irritation to the respiratory system. High concentration of vapours may induce: headache, nausea, dizziness.

## Protective equipment

Do not breathe fumes, vapour. Do not operate electrical equipment.



## first aid

- Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
- Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available.
- Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
- If swallowed, do not induce vomiting; transport to



## Unsuitable extinguishing media

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.



## Hazardous Materials Handling and Storage

Avoid inhaling vapour and/or mists. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Earth all equipmTank storage: Tanks must be specifically designed for use with this product. Bulk storage tanks should be diked (bunded) . Locate tanks away from heat and other sources of ignition. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources



## Methods and materials for containment and cleaning up

- For large liquid spills, transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Absorb with a suitable absorbent material and dispose of safely. R
- For small liquid spills, transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Absorb with a suitable absorbent material and dispose of safely. Remove contaminated soil and dispose

For more information please contact :

Occupational Health and Environment. Tel.1191

Code No. 10060615

Number of Revision :

3

Warning :

# Gas oil

UN No : 1202

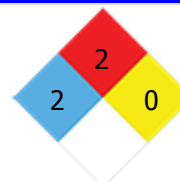
CAS No : 68334-30-5



Signal words : **Danger**

## Hazard statement :

- " Danger Flammable liquids "
- Acute Toxicity: Inhalation-Category 4
- Skin Corrosion/Irritation-Hazard category 2 Irritant
- Carcinogenicity-Hazard category 2
- Specific Target Organ Toxicity Category 2
- Aspiration Hazard-Hazard category 1
- Long Term Hazards To The Aquatic Environments-Hazar



## First Aid :

- Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
- Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available.
- Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
- If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment.

## Precautionary information :

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Ground/Bond container and receiving equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid breathing vapours
- Avoid release to the environment.

## Emergency number :

**038-971191**

## Manufacturer or Supplier Details

Company : PTT Global Chemical Public Company Limited

Address : 8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong, Rayong 21150 Thailand.

Telephone number : 66(0) 3897-1000 ext. 1190,1191

## Protective equipment

