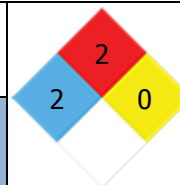




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1

Identification of the substance or mixture and of the supplier

1.1. Product name or GHS product identifier

1.1.1. Common name :	Fuel oil 380
1.1.2. Chemical formula :	
1.1.3. Commercial name :	Fuel oil 380
1.1.4. CAS number :	68476-33-5
1.1.5. Molecular weight :	N/A g/mol

1.2. Other product identifier :

1.2.1. UN Number :	1268
1.2.2. Annex I, EU directive 67/948/EC :	
1.2.3. EC number :	270-675-6

1.3. Recommendation for use and other prohibitions for use

N/A

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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1.6.2. Hazardous category	N/A	
1.6.3. Max quantity storage	-	

1.6.4. Uses

Marine fuel oil

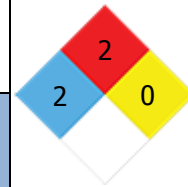
1.6.5. Other

N/A



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2

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 1
Acute Toxicity: Oral - Category 5
Acute Toxicity: Inhalation - Category 4
Germ Cell Mutagenicity - Hazard category 2
Carcinogenicity - Hazard category 1 (Both 1A and 1B)
Specific Target Organ Toxicity (Repeated Exposure) - Category 2
Aspiration Hazard - Hazard category 1
Aquatic Hazard (Acute) - Hazard category 1

2.2. GHS label elements, including precautionary statements

2.2.1. Chemical name :

N/A

2.2.2. Product name or GHS product identifier :

Fuel oil 380

2.2.3. Symbol and Hazard pictograms



2.2.4. Signal words :

Danger

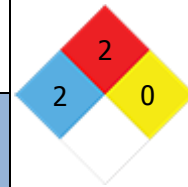
2.2.5. Hazard statement

Extremely flammable liquid and vapour
May be harmful if swallowed
Harmful if inhaled
Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
May cause 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
Very toxic to aquatic life



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2

Hazards identification (cont.)

2.2.6. Precautionary information

- Store in a tightly closed container
- Avoid contact with heat and ignition sources [and oxidizers] [- No Smoking]
- Store in a cool/low-temperature, well-ventilated [dry] place [away from heat and ignition sources]
- Do not let this chemical/product enter the environment
- Do not eat, drink or smoke during work
- Use only in well ventilated areas
- Wear protective clothing and gloves (specify protective clothing and type of gloves)
- In case of insufficient ventilation, wear suitable respiratory equipment

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

2.3.1.2. Mutagenic effects

Mutagenic Non-Mutagenic N/A

N/A

2.3.1.3. Other information

N/A

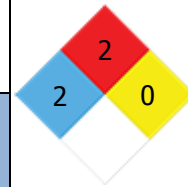
2.4. Environmental Hazards

N/A



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4

First-aid measures

4.1. First-aid

4.1.1. Inhalation

If inhaled, remove to fresh air. Get medical attention

4.1.2. Skin contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Drench contaminated clothing with water before removing. This is necessary to avoid the risk of sparks from static electricity that could ignite contaminated clothing. Contaminated clothing is a fire hazard. Contaminated leather.

4.1.3. Eyes contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

4.1.4. Ingestion

Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.

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.

treatment by physician

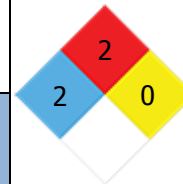
4.5. Other

irritation to skin ,eye,



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5

Firefighting measures

- 5.1. Unsuitable extinguishing media : Do not use water jet.
- 5.2. Suitable extinguishing media : Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).
- 5.3. Specific hazards arising from the chemical.
 Decomposition products may include the following materials:
 carbon dioxide
- 5.4. Special protective equipment and precautions 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
- 5.5. Precautions for fire fighters.
 N/A
- 5.6. Other.
 N/A

6

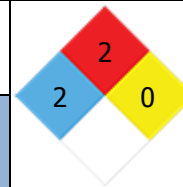
Accidental release measures

- 6.1. Personal precautions
 No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from
- 6.2. Protective equipment
-
- 6.3. Emergency procedures
- | | |
|--|---|
| 6.3.1. 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. | 6.3.2. 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 |
|--|---|
- 6.4. 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
- 6.5. Methods and materials for containment and cleaning up.
 Dispose of via a licensed waste disposal contractor.



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7

Handling and storage

7.1. Precautions for safe handling.

Do not ingest. Do not get in eyes, on skin or on clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat,

7.2. Incompatibility.

7.2.1. Safe storage condition.

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Avoid all possible sources of ignition (spark or flame) .

7.2.2. Incompatible chemicals condition.

Avoid all possible sources of ignition (spark or flame)

7.3. Storage area :

GC6

7.4. Incompatible chemicals condition.

N/A

7.5. Hazard Class by UN :

3

7.6. Classification :

N/A

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

N/A

8.3. Personal protective equipment



8.4. Personal hygiene

Gloves, hardhat, face shield, boots, safety glasses, respirator

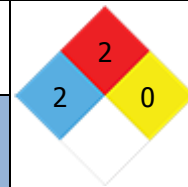
8.5. Other protection

n/a



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Physical and chemical properties

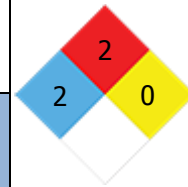
9.1. Appearance :	Liquid Liquid. (Thick, oily liquid.)		
9.2. Odour :	Strong Petroleum Odor, A		
9.3. Odour threshold limit :	N/A ppm		
9.4. pH-value :	N/A		
9.5. Melting point &Freezing point :	Melting point	<30 °C	
	Freezing point	<30 °C	
9.6. Initial boiling point/Boiling range	Boiling/condensation point	160 °C	
	Evaporation rate	160 °C – 500 °C	
9.7. Flash point :	>60 °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 :	0.5 % LEL and/or 5 %UEL		
9.11. Vapour pressure :	N/A kPa at - °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 :	N/A		
9.16. Auto-ignition temperature :	250 °C		
9.17. Decomposition temperature :	N/A °C		
9.18. Viscosity :	>3 mm2/s @100C		
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 ³		
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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10

Stability and reactivity

10.1. Reactivity

N/A

10.2. Chemical Stability :

- Stability Instability and emit gas N/A

10.3. Possibility of Hazardous reaction :

N/A

10.4. Conditions to avoid :

Heat and open flame

10.5. Incompatible materials :

Strong acids, alkalis, and strong oxidizers.

10.6. Hazardous decomposition products :

Burning or excessive heating may produce carbon monoxide and other harmful

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

May contain compounds reported to cause skin irritation and have toxic effects towards liver, kidneys and central nervous system

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)

long term chronic may be toxic

11.4. Numerical measures of toxicity

11.4.1. Acute oral toxicity : LD50 Oral - rat : >5,000 mg/kg

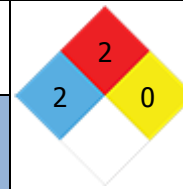
11.4.2. Acute dermal toxicity : LD50 Dermal - rabbit : >2,000 mg/kg

11.4.3. Acute toxic of the vapour : LC50 Inhalation - rat : 4.1 mg/l 4h



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Ecological information

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

12.1.1. Toxicity to fish :	Fish : NOEL: 0,1 mg/l 28 days
12.1.2. Crustaceans / Toxicity to crustaceans :	Crustacea (Daphnia magna)EC50: 2 mg/l, 48 hours
12.1.3. Algae / Toxicity to algae :	Algae (Selenastrum capricornutum) ErC50: 0.75 mg/l,

12.2. Degradability and persistence

Do not degrade quickly

12.3. Bio-accumulative potential :	N/A
12.4. Mobility in soil :	N/A

12.5. Other adverse effects :

N/A

13

Disposal considerations

13.1. Waste information :	N/A
13.2. Remain materials :	N/A
13.3. Waste disposal :	Removal to comply with local government regulations and local requirements.
13.4. Package contaminated disposal :	Disposal of containers is subject to local government and local regulations.

14

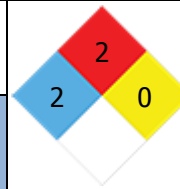
Transport information

14.1. UN Number :	1268	Pictogram
14.2. UN Proper Shipping Name :	PETROLEUM DISTILLATES,N.O.S. or PETROLEUM PRODUCTS, N.O.S.	
14.3. Transport Class/Division :	3	
14.4. Package group (if any) :	III	
14.5. Marine pollution :	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> 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 :	N/A	



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Regulatory information

15.1. Safety, health and environmental regulations

16

Regulatory information

16.1. Date of latest issue

26/3/2019

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 :

Secondary Reference :

16.5. Local Legislation Related

[HAZARDOUS SUBSTANCE ACT B.E. 2535](#)

16.6. Reference

16.7. Other details

Fuel oil 380

NFPA Rating



Emergency Call

038-971191

UN Number : 1268

CAS Number : 68476-33-5

Flash point : >60°C

Auto-ignition : 250°C

TWA-TLV :

Classification : F1

Hazard Statement

... () , () , ()



Health Effects

Fatal if swallowed, Toxic if swallowed, Harmful if swallowed, May be harmful if swallowed, Fatal in contact with skin, Toxic in contact with skin, Harmful in contact with skin, May be harmful in contact with skin, Fatal if inhaled, Toxic if inhaled, Harmful if inhaled, May be harmful if inhaled, Causes severe skin burns and eye damage, Causes skin irritation, Causes mild skin irritation, Causes serious eye damage, Causes serious eye irritation, Causes eye irritation, May cause allergy or asthma

Protective equipment

Protective clothing must be worn, Use hand protection in this area, Wear eye protection where appropriate, Respirators must be used where appropriate, Face masks must be used where appropriate



first aid

If inhaled, remove to fresh air. Get medical attention, In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Drench contaminated clothing with water before removing. This is necessary to avoid the risk of sparks from static electricity that could ignite contaminated clothing. Contaminated clothing is a fire hazard. Contaminated leather. In case of contact, immediately flush eyes with plenty of water for at least 15



Unsuitable extinguishing media

Use dry chemical, CO2, alcohol-resistant foam or water spray (fog) ., Do not use water jet.



Hazardous Materials Handling and Storage

Do not ingest. Do not get in eyes, on skin or on clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat,, Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Avoid all possible sources of ignition (spark or flame) ., Avoid all possible sources of ignition (spark or flame), N/A, Gloves, hardhat, face shield, boots, safety glasses, respirator, n/a



Methods and materials for containment and cleaning up

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from, Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas., 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. Avoid d

For more information please contact :

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

Code No. 10060022

Number of Revision :

2

Warning :

Fuel oil 380

UN No : 1268

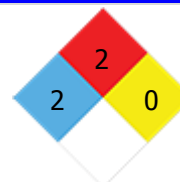
CAS No : 68476-33-5



Signal words : Danger

Hazard statement :

, , 0, 0, (



First Aid :

If inhaled, remove to fresh air. Get medical attention, In case of contact, immediately flush skin with plenty of water for at least 15 minutes whileremoving contaminated clothing and shoes. Drench contaminated clothing with water before removing. This is necessary to avoid the risk of sparks from static electricity that could ignitecontaminated clothing. Contaminated clothing is a fire hazard. Contaminated leather., In case of contact, immediately flush eyes with plenty of water for at least 15

Precautionary information :

- Store in a tightly closed container
- Avoid contact with heat and ignition sources [and oxidizers] [- No Smoking]
- Store in a cool/low-temperature, well-ventilated [dry] place [away from heat and ignition sources]
- Do not let this chemical/product enter the environment
- Do not eat, drink or smoke during work
- Use only in well ventilated areas
- Wear protective clothing and gloves (specify protective clothing and type of gloves)
- In case of insufficient ventilation, wear suitable respiratory equipment

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

