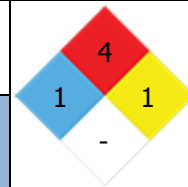




# Safety Data Sheet

## Propylene



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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 :	Propylene
1.1.2. Chemical formula :	C <sub>3</sub> H <sub>6</sub>
1.1.3. Commercial name :	Propylene
1.1.4. CAS number :	115-07-1
1.1.5. Molecular weight :	42.08 g/mol

#### 1.2. Other product identifier :

1.2.1. UN Number :	1077
1.2.2. Annex I, EU directive 67/948/EC :	601-011-00-9
1.2.3. EC number :	204-062-1

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

-

#### 1.4. Manufacturer or Supplier Details

1.4.1. Manufacturer or Supplier	1.4.2. Address
PTT Global Chemical Public Company Limited Branch 3	9, I-4 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong, Rayong 21150 Thailand.

1.4.3. Telephone number : 66(0) 3899-4000 ext. 5199

1.5. Emergency telephone number : 5751

#### 1.6. Other information

1.6.1. Hazardous substance  Yes  No

1.6.2. Hazardous category N/A

1.6.3. Max quantity storage 3,460 Ton

#### 1.6.4. Uses

Product from olefins process

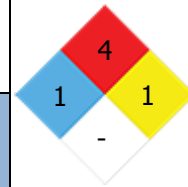
#### 1.6.5. Other

-



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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 gases - Category 1  
Gases under pressure - Liquefied gas

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

2.2.1. Chemical name : Propylene

2.2.2. Product name or GHS product identifier : Propylene

##### 2.2.3. Symbol and Hazard pictograms



2.2.4. Signal words : Danger

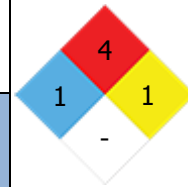
##### 2.2.5. Hazard statement

Extremely flammable gas  
Contains gas under pressure; may explode if heated



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### Hazards identification (cont.)

#### 2.2.6. Precautionary information

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Response : Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leakage, eliminate all ignition sources.  
Storage : Protect from sunlight. Store in a well-ventilated place.

#### 2.2.7. Supplemental information

-

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

-

#### 2.3.1. Potential Chronic Health Effects

##### 2.3.1.1. Carcinogen effects

Maybe-Carcinogen     Carcinogen     Non-Carcinogen     N/A

Not classified

##### 2.3.1.2. Mutagenic effects

Mutagenic     Non-Mutagenic     N/A

Not classified

##### 2.3.1.3. Other information

-

#### 2.4. Environmental Hazards

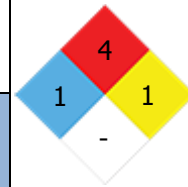
None





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## 4

### First-aid measures

#### 4.1. First-aid

##### 4.1.1. Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

##### 4.1.2. Skin contact

Remove contaminated clothing. In case of blistering, frostbite or freeze burns seek immediate medical attention.

##### 4.1.3. Eyes contact

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

##### 4.1.4. Ingestion

Risk of ingestion is extremely low. However, if oral exposure occurs, seek immediate medical assistance.

#### 4.2. Most important symptoms/effects

##### 4.2.1. Acute Effects

-

##### 4.2.2. Delayed effects

-

#### 4.3. Indication of immediate medical attention

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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

No specific treatment.

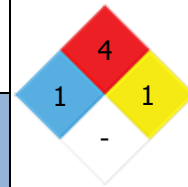
#### 4.5. Other

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.



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### 5

#### Firefighting measures

5.1. Unsuitable extinguishing media :	None
5.2. Suitable extinguishing media :	Any extinguisher suitable for Class B fires, dry chemical, fire fighting foam, CO <sub>2</sub> , and other gaseous agents .
5.3. Specific hazards arising from the chemical.	Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke) .
5.4. Special protective equipment and precautions for fire-fighters.	Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk.
5.5. Precautions for fire fighters.	Gas fires should not be extinguished unless flow of gas can be immediately stopped. Shut off gas source and allow gas to burn out.If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to pro
5.6. Other.	-

### 6

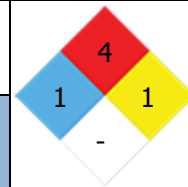
#### Accidental release measures

6.1. Personal precautions	
Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.	
6.2. Protective equipment	
6.3. Emergency procedures	
6.3.1. Large Spill	6.3.2. Small Spill
For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Isolate area, particularly around ends of storage vessels.	If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to protect personnel attempting to stop leak. Use water to cool equipment, surfaces and containers exposed to fire .
6.4. Environmental precautions	
Do not flush down sewer or drainage systems.	
6.5. Methods and materials for containment and cleaning up.	
Do not flush down sewer or drainage systems. Do not touch spilled liquid (frostbite/freeze burn hazard!) . Consider the use of water spray to disperse vapors.	



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### 7

### Handling and storage

7.1. Precautions for safe handling.

Keep away from flame, sparks and excessive temperatures. Bond and ground containers. Use only in well ventilated areas.

7.2. Incompatibility.

7.2.1. Safe storage condition.

Store only in approved containers. Bond and ground containers. Keep away from flame, sparks, excessive temperatures and open flame.

7.2.2. Incompatible chemicals condition.

Keep away from strong oxidizers, ignition sources and heat.

7.3. Storage area :

GC3 Tank area

7.4. Incompatible chemicals condition.

Avoid all possible sources of ignition (spark or flame) .

7.5. Hazard Class by UN :

7.6. Classification :

2.1

### 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
Propylene	500 ppm	-	-	-	-	-	-

8.2. Appropriate engineering controls

Use only with adequate ventilation.

Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne

8.3. Personal protective equipment



8.4. Personal hygiene

Wash hands, forearms and face thoroughly after handling chemical products, before eating.

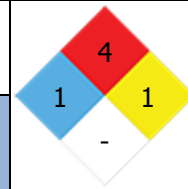
8.5. Other protection

-



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### 9

### Physical and chemical properties

9.1. Appearance :	Gas Colorless		
9.2. Odour :	Odorless/Mild		
9.3. Odour threshold limit :	N/A ppm		
9.4. pH-value :	N/A		
9.5. Melting point &Freezing point :	Melting point	-185.0 °C	
	Freezing point		
9.6. Initial boiling point/Boiling range	Boiling/condensation point	-48 °C	
	Evaporation rate	-	
9.7. Flash point :	-107.78 °C (Close cup)		
9.8. Evaporation rate :	- mg/sec		
9.9. Flammability (solid, gas) :	Burning time	- sec	
	Burning Rate	- mm/sec	
9.10. Upper/lower flammability or explosive limits :	2 % LEL and/or 11.1 %UEL		
9.11. Vapour pressure :	942 kPa at 25 °C		
9.12. Vapour density :	Respect to air	1.5 kPa	
9.13. Relative density :	-		
9.14. Solubility(ies) :	0.2 g/l		
9.15. Partition coefficient : n-octanol/water :	1.77		
9.16. Auto-ignition temperature :	455 °C		
9.17. Decomposition temperature :	- °C		
9.18. Viscosity :	-		
9.19. Heat of Combustion :	- °C		
9.20. The ignition distance test :	- cm		
9.21. The enclosed space ignition test	- s/m <sup>3</sup>		
9.22. The foam test :	Vapor density	-	cm
	Flames burning up	-	sec

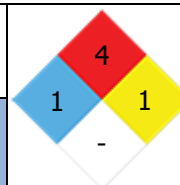
Detail	Type of Substance		Unit
	Other substance	Powders or dusts	
Use water spray to blanket fire, cool fire exposed containers, to stop leak, and burn	-	-	minute
Burning time	-	-	sec
Burning rate	-	-	mm/s





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### 10

### Stability and reactivity

#### 10.1. Reactivity

The product is stable.

#### 10.2. Chemical Stability :

- Stability       Instability and emit gas       N/A

#### 10.3. Possibility of Hazardous reaction :

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)

#### 10.5. Incompatible materials :

Oxidizers

#### 10.6. Hazardous decomposition products :

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke) .

#### 10.7. Corrosively :

None

### 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

Propane exhibits some degree of anesthetic action and is mildly irritating to the mucous membranes. At high concentrations propane acts as a simple asphyxiant without other significant physiological effects.

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

High concentrations may cause death due to oxygen depletion.

##### 11.2.3. Symptom related with toxicology

Frostbite

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

Propane exhibits some degree of anesthetic action and is mildly irritating to the mucous membranes

#### 11.4. Numerical measures of toxicity

11.4.1. Acute oral toxicity :      LC50 > 65,000 ppm/4h

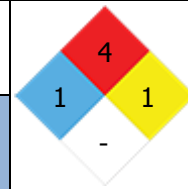
11.4.2. Acute dermal toxicity :      -

11.4.3. Acute toxic of the vapour :      -



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### 12

#### Ecological information

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

12.1.1. Toxicity to fish : Not available.

12.1.2. Crustaceans / Toxicity to crustaceans : Not available.

12.1.3. Algae / Toxicity to algae : Not available.

12.2. Degradability and persistence

No information available

12.3. Bio-accumulative potential : Potential is low : Log Kow = 1.77

12.4. Mobility in soil : Not available.

12.5. Other adverse effects :

Not available.

### 13

#### Disposal considerations

13.1. Waste information : Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

13.2. Remain materials : -

13.3. Waste disposal : 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 requireme

13.4. Package contaminated disposal : Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

### 14

#### Transport information

14.1. UN Number : 1077

14.2. UN Proper Shipping Name : PROPYLENE

14.3. Transport Class/Division : 2.1

14.4. Package group (if any) :

14.5. Marine pollution :  Yes  No  N/A  
Not available.

14.6. Special precautionary for user : Not available.

14.7. Transport in bulk : Not available.

14.8. Classification code :

14.9. Other :

Not available.

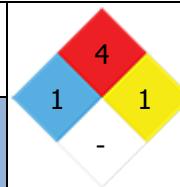
#### Pictogram





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### 15

#### Regulatory information

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

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### 16

#### Other information

##### 16.1. Date of latest issue

28/6/2021

##### 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 Specific hazards Possibility of hazardous reactions arising from the chemical	① Health	0 = No hazard 1 = Slight hazard 2 = Moderate hazard 3 = Serious hazard 4 = Severe hazard
	④ Flammability	
	① Reactivity	

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

Primary Reference :

Secondary Reference :

##### 16.5. Local Legislation Related

[Chemical hazardous list in 2013](#)

[Department of Labour Protection and Welfare](#)

##### 16.6. Reference

<http://ghs.diw.go.th:8080/GHSThaiUser/servlet/ChemServlet?action=QCD&pkchemid=00689&casno=115-07-1>

##### 16.7. Other details

-

# Propylene

## NFPA Rating



## Emergency Call

5751

UN Number : 1077 CAS Number : 115-07-1

Flash point : 107.78 °C Auto-ignition : 455°C

TWA-TLV : 500 ppm Classification :

## Hazard Statement

Extremely flammable gas, Contains gas under pressure; may explode if heated



## Health Effects

Contact with liquid may cause cold burns/frostbite.

## Protective equipment

Safety helmets must be worn where appropriate, Use hand protection in this area, Foot protection must be worn where appropriate, Wear eye protection where appropriate, Respirators must be used where appropriate



## first aid

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately., Remove contaminated clothing. In case of blistering, frostbite or freeze burns seek immediate medical attention., In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention., R



## Unsuitable extinguishing media

Any extinguisher suitable for Class B fires, dry chemical, fire fighting foam, CO2, and other gaseous agents ., None



## Hazardous Materials Handling and Storage

Keep away from flame, sparks and excessive temperatures. Bond and ground containers. Use only in well ventilated areas., Store only in approved containers. Bond and ground containers. Keep away from flame, sparks, excessive temperatures and open flame., Keep away from strong oxidizers, ignition sources and heat, , Do not touch spilled liquid (frostbite/freeze burn hazard!) .



## Methods and materials for containment and cleaning up

For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Isolate area, particularly around ends of storage vessels., If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to protect personnel attempting to stop leak. Use water to cool equipment, surfaces and containers exposed to fire ., Do not flush down sewer or drainage systems., Do not flush down sewer or drainage systems

For more information please contact :

Code No. 10030081

Number of Revision :

SHE Olefins II - 5740

2

Warning : Danger

# Propylene

UN No : 1077

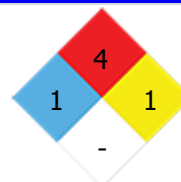
CAS No : 115-07-1



Signal words : **Danger**

## Hazard statement :

Extremely flammable gas, Contains gas under pressure; may explode if heated



## First Aid :

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately., Remove contaminated clothing. In case of blistering, frostbite or freeze burns seek immediate medical attention., In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention., R

## Precautionary information :

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response : Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leakage, eliminate all ignition sources.

Storage : Protect from sunlight. Store in a well-ventilated place.

## Emergency number :

**5751**

## Manufacturer or Supplier Details

Company : PTT Global Chemical Public Company Limited Branch 3

Address : 9, I-4 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong, Rayong 21150 Thailand.

Telephone number : 66(0) 3899-4000 ext. 5199

## Protective equipment

