

# SAFETY DATA SHEET LIQUIFIED NATURAL GAS (LNG)

**SDS #**: 089791

#### Section 1. Identification

Product identifier : LIQUIFIED NATURAL GAS (LNG)

Chemical name : Natural gas

Other means of : Synthetic natural gas; GAS,NATURAL; LIQUIFIED NATURAL GAS; Natural gas,

identification compressed; Marsh gas

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

**Identified uses** 

Fuel

#### Supplier's details :

TotalEnergies Marine Fuels Pte Ltd

182 Cecil Street #27-01 Frasers Tower Singapore 069547 Tel: +65 6849 5266

ms.ap-sds@totalenergies.com

TotalEnergies Marketing Asia-Pacific Middle East Pte. Ltd.

182 Cecil Street #27-01 Frasers Tower Singapore 069547 Tel: +65 6879 2200

ms.ap-sds@totalenergies.com

See section 16 to have the contact details of the local supplier

**Emergency telephone** number (with hours of

operation)

Asia-Pacific: +65 3158 1074

#### Section 2. Hazards identification

Classification of the substance or mixture

: FLAMMABLE GASES - Category 1

GASES UNDER PRESSURE - Refrigerated liquefied gas

#### GHS label elements, including precautionary statements

Hazard pictograms :





Signal word : Danger

**Hazard statements** : Extremely flammable gas.

Contains refrigerated gas; may cause cryogenic burns or injury.

**Precautionary statements** 

General : If medical advice is needed, have product container or label at hand. Keep out of

reach of children. Read label before use.

Date of revision : 2023/05/02 Singapore ENGLISH Version : 1 1/13



SDS#: 089791

: Wear cold insulating gloves and either face shield or eye protection. Keep away **Prevention** from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

Response : Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate

medical advice or attention. Leaking gas fire: Do not extinguish, unless leak can be

stopped safely. In case of leakage, eliminate all ignition sources.

: Store in a well-ventilated place. Storage

**Disposal** : Not applicable.

Other hazards which do not result in classification

: May form explosive mixtures with air.

The vapor/gas is heavier than air and will spread along the ground.

The gas can cause asphyxiation without warning by replacing the oxygen in the air.

Can cause burns similar to frostbite.

### Section 3. Composition/information on ingredients

Substance/mixture : Substance **Chemical name** : Natural gas

Other means of : Synthetic natural gas; GAS, NATURAL; LIQUIFIED NATURAL GAS; Natural gas, identification

compressed; Marsh gas

#### **CAS** number/other identifiers

**CAS** number : 8006-14-2 **EC** number : 232-343-9

| Ingredient name | % (w/w) | CAS number |
|-----------------|---------|------------|
| Natural gas     | 100     | 8006-14-2  |

Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

| Ingredient name | % (w/w) | CAS number |
|-----------------|---------|------------|
| methane         | >80     | 74-82-8    |
| ethane          | <10     | 74-84-0    |
| butane          | <5      | 106-97-8   |
| propane         | <5      | 74-98-6    |

**Additional information** : Natural gas, gaseous hydrocarbon C1-C4

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.

Chemical formula : Not available.

### 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 if irritation occurs.

If frostbite occurs, get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse

health effects persist or are severe.

: 2023/05/02 Date of revision **ENGLISH** Version : 1 Singapore



otalEnergies sps #: 089791

**Skin contact** 

: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.

If frostbite occurs, get medical attention. Do not rub affected area.

High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent. In this case, the

casualty should be sent immediately to hospital.

Ingestion

: Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. 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. As this product rapidly becomes a gas when released, refer to the inhalation section.

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

#### Potential acute health effects

**Eye contact** : Extremely cold material. Liquid can cause burns similar to frostbite.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact**: Extremely cold material. Dermal contact with rapidly evaporating liquid could result

in freezing of the tissues or frostbite.

**Ingestion**: Ingestion of liquid can cause burns similar to frostbite.

#### Over-exposure signs/symptoms

**Eye contact** : State Gaseous: May cause slight transient irritation.

State liquid: Can cause burns similar to frostbite.

**Inhalation** : May cause respiratory irritation.

High vapor concentrations can cause headaches, dizziness, drowsiness and nausea

and may lead to unconsciousness.

**Skin contact** : State liquid: Can cause burns similar to frostbite.

**Ingestion** : Not an expected route of exposure.

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

Notes to physician

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

**Specific treatments** 

: No specific treatment.

**Protection of first-aiders** 

No action shall be taken involving any personal risk or without suitable training.

At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

See toxicological information (Section 11)

# Section 5. Fire-fighting measures

#### **Extinguishing media**

Suitable extinguishing

: Use dry chemical, CO2, water spray (fog) or foam.

media

**Unsuitable extinguishing** 

media

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

Date of revision : 2023/05/02 Singapore ENGLISH Version :1 3/13



**SDS #**: 089791

### Specific hazards arising from the chemical

Hazardous thermal decomposition products

: Contains gas under pressure. Contains refrigerated gas. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

: Decomposition products may include the following materials:

Carbon dioxide (CO<sub>2</sub>). carbon monoxide Toxic gases Aldehyde.

Soot

## Special protective actions for fire-fighters

: If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice.

Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

### Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Stop leak if without risk.

Accidental releases pose a serious fire or explosion hazard. 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.

For emergency responders:

If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

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**

: Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. 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).

#### Methods and materials for containment and cleaning up

**Small spill** 

: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill

: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Date of revision : 2023/05/02 Singapore ENGLISH Version :1 4/13



SDS #: 089791

### Section 7. Handling and storage

#### Precautions for safe handling

#### **Protective measures**

Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Contains refrigerated gas. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. 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. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container.

#### Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### including any incompatibilities

Conditions for safe storage, : All the electric installations, including the lighting of rooms that may contain this product, must be adapted to the risk area, in compliance with the European ATEX

Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

### Section 8. Exposure controls/personal protection

#### **Control parameters**

#### Occupational exposure limits

| Ingredient name | Exposure limits  |
|-----------------|--|
|                 | ACGIH TLV (United States, 1/2021). Oxygen Depletion [Asphyxiant]. Explosive potential. |

Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

| Ingredient name | Exposure limits                                      |
|-----------------|--|
| methane         | ACGIH TLV (United States, 1/2021). Oxygen Depletion  |
|                 | [Asphyxiant]. Explosive potential.                   |
| ethane          | ACGIH TLV (United States, 1/2021). Oxygen Depletion  |
|                 | [Asphyxiant]. Explosive potential.                   |
| butane          | Workplace Safety and Health Act (Singapore, 2/2006). |
|                 | PEL (long term): 800 ppm 8 hours.                    |
|                 | PEL (long term): 1900 mg/m³ 8 hours.                 |
| propane         | ACGIH TLV (United States, 1/2021). Oxygen Depletion  |
| F. 5 F 2 2      | [Asphyxiant]. Explosive potential.                   |

#### Occupational exposure limits Philippines

| Product/substance | Exposure limit values  |
|-------------------|--|
| Natural gas       | ACGIH TLV (United States, 1/2021). Oxygen Depletion [Asphyxiant]. Explosive potential. |

Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

Date of revision : 2023/05/02 **ENGLISH** Version :1 Singapore



SDS #:

089791

| Product/substance | Exposure limit values   |
|-------------------|---|
| methane           | ACGIH TLV (United States, 1/2021). Oxygen Depletion [Asphyxiant]. Explosive potential.  |
| ethane            | ACGIH TLV (United States, 1/2021). Oxygen Depletion [Asphyxiant]. Explosive potential.  |
| butane            | ACGIH TLV (United States, 1/2021). [Butane] Explosive potential.  |
| propane           | STEL: 1000 ppm 15 minutes. <b>TLV = Threshold Limit Value (Philippines, 4/2016).</b> TLV: 1800 mg/m³ 8 hours.  TLV: 1000 ppm 8 hours. |

#### **Advisory OEL**

: No known significant effects or critical hazards.

### Appropriate engineering controls

: Use only with adequate ventilation. Use explosion-proof ventilation equipment. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Wear suitable protective clothing, gloves and eye/face protection.

The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

### **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**

#### **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: safety glasses with side-shields.

#### **Skin protection**

**Hand protection** 

: Cold insulating gloves, Standard: EN 511 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.

#### **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.

Date of revision : 2023/05/02 Singapore ENGLISH Version :1 6/13



otalEnergies sps #: 089791

**Respiratory protection**: None under normal use conditions. If the situation cannot be completely assessed,

or if an oxygen deficiency is possible, only SCBA's should be used.

In case of inadequate ventilation wear respiratory protection: organic vapor filter

(Type AX).

In an emergency or for exceptional short-lasting jobs in an atmosphere polluted by the product, it is necessary to wear protective respiratory equipment. (powered air)

Thermal hazards : If there is a risk of contact with the liquid, all protective equipment worn should be

suitable for use with extremely low temperature materials.

### Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

**Appearance** 

Physical state : Gas. [Liquefied gas.]

Color : Colorless.

Odor : Odorless.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : -183°C (-297.4°F)

**Boiling point** : -166 to -157°C (-266.8 to -250.6°F)

Flash point : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Extremely flammable in the presence of the following materials or conditions: open

flames, sparks and static discharge.

Lower and upper explosive

(flammable) limits

: Lower: 5% Upper: 15%

Vapor pressure : 600 to 39000 kPa (4500.38 to 292524 mm Hg)

Vapor density : Not available.

Relative density : 0.54 to 0.66

**Density** : 0.54 to 0.66 g/cm³ [0°C]

Solubility(ies) :

| Media | Result      |
|-------|-------------|
| water | Not soluble |

Miscible with water : No.

Solubility in water : 0.024 to 0.061 g/l

Partition coefficient: n- : ≤2.

octanol/water

Auto-ignition temperature : >400°C (>752°F)

Decomposition temperature : Not available.

Viscosity : Not applicable.

Flow time (ISO 2431) : Not available.

**Particle characteristics** 

Median particle size : Not applicable.

Date of revision : 2023/05/02 Singapore ENGLISH Version : 1 7/13



SDS#: 089791

### Section 10. Stability and reactivity

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

**Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).

Possibility of hazardous

reactions

: Rapid Phase Transition when exposed to water (RPT)

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.

Incompatible materials Strong oxidizing agents

Halogens

**Hazardous decomposition** 

products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

**SADT** : Not available.

### Section 11. Toxicological information

#### Information on toxicological effects

#### **Acute toxicity**

| Product/substance | Result                          | Species | Dose        | Exposure   | Test |
|-------------------|---------------------------------|---------|-------------|------------|------|
| Natural gas       | LC50 Inhalation Dusts and mists | Rat     | >800000 ppm | 0.25 hours | -    |
|                   | LC50 Inhalation Vapor           | Rat     | 40.2 mg/l   | 1 hours    | -    |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Irritation/Corrosion** 

Skin : Based on available data, the classification criteria are not met. **Eyes** : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

**Sensitization** 

Skin : Based on available data, the classification criteria are not met. Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

Carcinogenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

Reproductive toxicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Teratogenicity** 

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Not available.

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

Date of revision : 2023/05/02 **ENGLISH** Version : 1 Singapore



**TotalEnergies** SDS#: 089791

#### Specific target organ toxicity (repeated exposure)

Not available.

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Aspiration hazard** 

Not available.

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

**Eye contact** : Extremely cold material. Liquid can cause burns similar to frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Extremely cold material. Dermal contact with rapidly evaporating liquid could result

in freezing of the tissues or frostbite.

Ingestion : Ingestion of liquid can cause burns similar to frostbite.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : State Gaseous: May cause slight transient irritation.

State liquid: Can cause burns similar to frostbite.

Inhalation : May cause respiratory irritation.

High vapor concentrations can cause headaches, dizziness, drowsiness and nausea

and may lead to unconsciousness.

**Skin contact** : State liquid: Can cause burns similar to frostbite.

Ingestion : Not an expected route of exposure.

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

Short term exposure

**Potential immediate** effects

Not available.

**Potential delayed effects** 

: Not available.

**Long term exposure** 

**Potential immediate** 

: Not available.

effects

**Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards. Carcinogenicity : No known significant effects or critical hazards. Mutagenicity : No known significant effects or critical hazards. Reproductive toxicity : No known significant effects or critical hazards.

**Numerical measures of toxicity** 

**Acute toxicity estimates** 

Date of revision : 2023/05/02 **ENGLISH** Version : 1 Singapore



SDS#:

089791

| Product/substance | Oral (mg/<br>kg) | Dermal<br>(mg/kg) | Inhalation<br>(gases)<br>(ppm) | (vapors) | Inhalation<br>(dusts<br>and mists)<br>(mg/l) |
|-------------------|------------------|-------------------|--------------------------------|----------|--|
| Natural gas       | N/A              | N/A               | N/A                            | 20.1     | N/A  |

Other information

Not available.

### **Section 12. Ecological information**

**Toxicity** 

Conclusion/Summary : Not available

#### Persistence/degradability

| Product/substance | Aquatic half-life | Photolysis | Biodegradability |
|-------------------|-------------------|------------|------------------|
| Natural gas       | -                 | -          | Not readily      |

#### **Bioaccumulative potential**

| Product/substance | LogK <sub>ow</sub> | BCF | Potential |
|-------------------|--------------------|-----|-----------|
| Natural gas       | ≤2.8               | -   | low       |

#### **Mobility in soil**

Soil/water partition coefficient (Koc)
Mobility in soil

: Not available.

: Due to its high volatility, this gas is unlikely to generate soil or water pollution. Air Released into the atmosphere, constituents are rapidly diluted and undergo photodegradation

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. Empty pressure vessels should be returned to the supplier. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Date of revision : 2023/05/02 Singapore ENGLISH Version :1 10/13



**SDS #**: 089791

### **Section 14. Transport information**

|                                   | UN                                 | IMDG                               | ICAO/IATA | ADR/RID                            | ADN                                |
|-----------------------------------|------------------------------------|------------------------------------|-----------|------------------------------------|------------------------------------|
| UN/ID No                          | UN1972                             | UN1972                             | UN1972    | UN1972                             | UN1972                             |
| UN proper shipping name           | METHANE,<br>REFRIGERATED<br>LIQUID | METHANE,<br>REFRIGERATED<br>LIQUID |           | METHANE,<br>REFRIGERATED<br>LIQUID | METHANE,<br>REFRIGERATED<br>LIQUID |
| Transport<br>hazard class<br>(es) | 2.1                                | 2.1                                | 2.1       | 2                                  | 2                                  |
| Packing group                     | -                                  | -                                  | -         | -                                  | -                                  |
| Environmental hazards             | No.                                | No.                                | No.       | No.                                | No.                                |

#### **Additional information**

IMDG : Emergency schedules \_F-D\_, S-U

ICAO/IATA : Quantity limitation Passenger and Cargo Aircraft: Forbidden. Packaging

instructions: Forbidden. Cargo Aircraft Only: Forbidden. Packaging instructions: Forbidden. Limited Quantities - Passenger Aircraft: Forbidden. Packaging

instructions: Forbidden.

ADR/RID : <u>Hazard identification number</u> 223

Limited quantity 0 Special provisions 392 Tunnel code (B/D)

ADN : <u>Special provisions</u> 392

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 : Not available.

to IMO instruments

### Section 15. Regulatory information

#### Singapore - hazardous chemicals under government control

None.

#### **National regulations**

This Safety Data Sheet (SDS) has been prepared according to Singapore Standard SS 586 on "Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods"

Workplace Safety and Health (General Provision) Regulations

#### **Philippines**

#### **National regulations**

This Safety Data Sheet (SDS) has been prepared according to EMB Memorandum Circular on "Guidance Manual for Department Administrative Order 2015-09, Rules and Procedures for the Implementation of GHS in Preparation of SDS and Labelling Requirements of Toxic Chemical Substances"

Date of revision : 2023/05/02 Singapore ENGLISH Version :1 11/13



**SDS #**: 089791

#### **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**

Australia inventory (AIIC) : This material is listed or exempted.

Canada inventory (DSL/NDSL) : This material is listed or exempted.

China inventory (IECSC) : This material is listed or exempted.

Europe inventory (EC) : This material is listed or exempted.

Japan inventory : Japan inventory (CSCL): Not determined.

Japan inventory (ISHL): Not determined.

**New Zealand Inventory of Chemicals (NZIoC)** 

**Philippines inventory (PICCS)** 

Korea inventory (KECI)

**Taiwan Chemical Substances Inventory (TCSI)** 

Thailand inventory
Turkey inventory

**United States inventory (TSCA 8b)** 

**Vietnam inventory** 

: This material is listed or exempted.

: Not determined.

: This material is listed or exempted.: This material is listed or exempted.

: Not determined.

: Not determined.

: This material is listed or exempted.: This material is listed or exempted.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

### Section 16. Other information

**History** 

Date of revision : 2023/05/02

previous revision date : No previous validation

Version : '

**Key to abbreviations** : 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

Date of revision : 2023/05/02 Singapore ENGLISH Version : 1 12/13



**SDS #**: 089791

**UN = United Nations** 

#### Procedure used to derive the classification

| Classification   | Justification                   |
|--|---------------------------------|
| FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Refrigerated liquefied gas | Expert judgment Expert judgment |

#### Additional details on the supplier of the product

Total (Philippines) Corporation 7th Floor, 11th Corporate Center 11th Avenue, corner Triangle Drive, North Bonifacio, Bonifacio Global City 1634 Taguig City Philippines Tel: +63 2 88490888 Fax: +63 2 88490889

References

: Not available.

Indicates information that has changed from previously issued version.

#### **Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Date of revision : 2023/05/02 Singapore ENGLISH Version : 1 13/13