



## MATERIAL SAFETY DATA SHEET

PRODUCT

**THANG LONG CRUDE OIL**

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME THANG LONG CRUDE OIL

APPLICATION : THANG LONG CRUDE OIL

Date issued : 01<sup>ST</sup> JUL 2017

COMPANY IDENTIFICATION

**PVEP – BLOCK 01/97 & 02/97**

16<sup>th</sup> floor, Petroland Tower, 12 Tan Trao Street, Tan Phu Ward, District 7, Ho Chi Minh City, The Socialist Republic of Viet Nam

Tel: 84-28-5416 0581/2/2/4/5/6

Fax: 84-28-5416 0580

**EMERGENCY TELEPHONE NUMBER(S) : 84-903123877 – Mr. Tran Nam Tien ( Lifting/Marine Coordinator)**

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

CHEMICAL NAME	CAS NO	% (w/w)
Petroleum Hydrocarbon	LSJOC complex mixture of hydrocarbon crude oil	100

### 3. HAZARDS IDENTIFICATION

HUMAN HEALTH HAZARDS - ACUTE

**EYE CONTACT:** The eye irritation potential of this substance has not been determined. However, it may be slightly irritating to the eyes and could cause prolonged impairment of your vision. The degree of the injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment.

**SKIN CONTACT:** It is expected to cause no more than minor skin irritation, but prolonged or frequently repeated skin contact may be harmful.

**INGESTION:** The oral toxicity of this substance has not been determined. However, it may be slightly toxic to internal organs if swallowed. The degree of injury will depend on the amount absorbed from the gut.

**INHALATION:** Breathing the vapor may be irritating to the respiratory tract. Prolonged breathing of vapors can cause central nervous system effect.

**AGGRAVATION OF EXISTING CONDITIONS:** The systematic toxicity of this substance has not been determined, however, it is considered to be practically non-toxic to internal organs if it gets on the skin.

### 4. FIRST AID MEASURES

**EYE CONTACT:** PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT. Immediately flush eye with water for at least 15 minutes while holding eyelids open. If only one eye is affected be sure to use care not to contaminate the other eye with the run-off. If irritation persists, repeat flushing. Get immediate medical attention.



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**SKIN CONTACT:** Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

**INGESTION:** Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention.

**INHALATION:** Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.

**NOTE TO PHYSICIAN:** In general, emesis induction is unnecessary in high viscosity, low volatility products such as oils and greases.

### **5. FIRE FIGHTING MEASURES**

**FLASH POINT** -35°C by (ASTM D 56-05 )

**EXTINGUISHING MEDIA:** Material will float and can be re-ignited on surface of water. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames. Do not use a direct stream of water.

**FIRE EXTINGUISHING INSTRUCTION:** Material will not burn unless preheated. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus.

### **6. ACCIDENTAL RELEASE MEASURES**

**PROTECTIVE MEASURES:** May burn although not readily ignitable. Wear appropriate personal protective equipment when cleaning up spills. Restrict access to area as appropriate until clean-up operations are complete. Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.

**SPILL MANAGEMENT:**

**FOR LARGE SPILLS:** Remove with vacuum truck or pump to storage/salvage vessels.

**FOR SMALL SPILLS:** Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

**ENVIRONMENTAL PRECAUTIONS:** Prevent material from entering sea, river, sewers or waterways. Spilled product may pose a risk to the aquatic ecosystem if released. If drains, streams, soil or sewers become contaminated, notify local authority.

### **7. HANDLING AND STORAGE**

**PRECAUTIONARY MEASURES:** Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet. Launder contaminated clothing before reuse. Properly dispose of contaminated leather articles such as shoes or belts that cannot be decontaminated. Avoid heat, open flames, including pilot lights, and strong oxidizing agents. Use explosion-proof ventilation to prevent vapor accumulation. Ground all handling equipment to prevent sparking.

**STORAGE:** Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

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**CONTAINER WARNINGS:** Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

**HANDLING:** Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Avoid breathing vapors from headspace of newly opened containers.

**STORAGE CONDITIONS:** Store in suitable labelled containers. Store the containers tightly closed. Store separately from oxidizers.

**SUITABLE CONSTRUCTION MATERIAL:** PVC, Teflon, HDPE (high density polyethylene), Ethylene propylene, Polypropylene, Polyethylene, Stainless Steel 304, Stainless Steel 316L, Hastelloy C-276, Plexiglass, Kalrez, Alfax, Epoxy phenolic resin.

**UNSUITABLE CONSTRUCTION MATERIAL:** Copper, Brass, Nylon, Buna-N, Natural rubber, Polyurethane, Hypalon, Viton, Neoprene, aluminium, Mild steel, Carbon Steel C1018, EPDM.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**OCCUPATIONAL EXPOSURE LIMITS:** Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

### OCCUPATIONAL EXPOSURE LIMITS

	PEL- TWA ( ppm)		STEL (ppm)	
	OSHA	VN Standard	OSHA	VN Standard
Benzene	1	1.6	5	4.7
Hydrogene sulfide	10	7	15	10
Toluene	100	27	150	80
Xylene	100	23	150	69

**EXPOSURE CONTROLS:** Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

**PERSONAL PROTECTION:** Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this material is provided below.

**EYE PROTECTION:** Chemical goggles or Safety glasses with side shields.

**SKIN PROTECTION:** Use protective clothing which is chemically resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

Published literature, test data and/or glove and clothing manufacturers indicate the best protection is provided by: Neoprene, or Nitrile Rubber.

**RESPIRATORY PROTECTION:** If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn.



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### 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	black liquid
ODOR	hydrocarbon odor
FLASH POINT	-35 °C ( ASTM D 56-05 )
SPECIFIC GRAVITY	0.8397 @ 15 °C
POUR POINT	27°C by ASTM D97
BENZENE	1.467% by volume
TOLUEN	2.629% by volume
N- HEXANE	17.7 % by volume
XYLENE	0.008% by volume
TOTAL SULPHUR	0.090 % by Wt by ASTM D 4294

Note: These physical and chemical properties are typical values for this product and are subject to change.

### 10. STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat and open flames.

MATERIALS TO AVOID: Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products are highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Aldehydes, Carbon Monoxide, Carbon Dioxide, Hydrogen Sulfide, Ketones and other unidentified organic compounds may be formed upon combustion.

### 11. TOXICOLOGICAL INFORMATION

Not available

### 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT SUMMARY: There is no ecological data available for this product. However, this product is an oil. It is persistent and does not readily biodegrade.

### 13. DISPOSAL CONSIDERATIONS

Dispose of wastes in an approved incinerator or waste treatment/disposal site, in accordance with all applicable regulations. Do not dispose of wastes in local sewer or with normal garbage.

Empty drums should be taken for recycling, recovery, or disposal through a suitably qualified or licensed contractor.

### 14. TRANSPORT INFORMATION

#### AIR TRANSPORT (ICAO/IATA)

Proper Shipping Name  
UN/ID No

PETROLEUM CRUDE OIL.  
UN 1267



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Hazard Class - Primary	3
Packing Group	II
IATA Cargo Packing Instructions	307
IATA Cargo Aircraft Limit	60 L
IATA Passenger Packing Instructions	305
IATA Passenger Aircraft Limit	10 liters

**MARINE TRANSPORT (IMDG/IMO)**

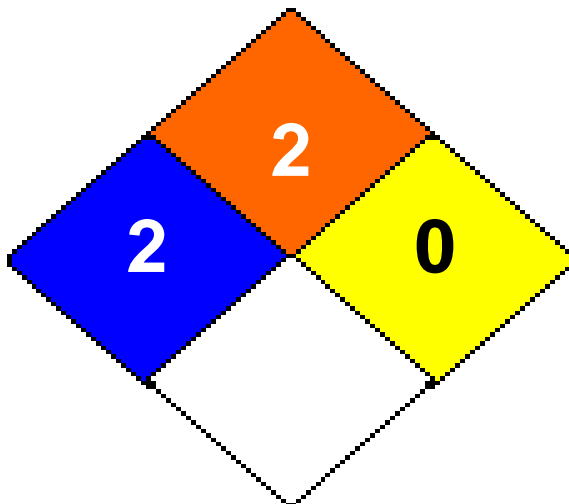
Proper Shipping Name	PETROLEUM CRUDE OIL.
UN/ID No	UN 1267
Hazard Class - Primary	3
Packing Group	II
Packing Group	P001
Limited quantify	1 litter

**15. REGULATORY INFORMATION**

HAZARD SYMBOLS:



NFPA RATING :



HEALTH : 2 FLAMMABILITY : 2 REACTIVITY : 0 OTHER : -

0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

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### 16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations.

Prepared by TRAN NAM TIEN – Lifting/ Marine Coordinator of PVEP – BLOCK 01/97 & 02/97  
Checked by NGUYEN BA LOC – HSE Coordinator of PVEP – BLOCK 01/97 & 02/97  
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