

# Material Safety Data Sheet (MSDS)

<b>Product</b>	<b>Slurry Oil</b>		
<b>CAS No.</b>	<b>Date of preparation</b>	<b>Date of preparation</b>	<b>Department of Team</b>
<b>64741-62-4</b>	<b>2012-08-09</b>	<b>2019-02-20</b>	<b>Safety / Health Planning Team</b>

## 1. IDENTIFICATION

### A. Product name

- Slurry Oil [PD1135]

### B. Recommended use and restriction on use

- General use : Not available
- Restriction on use : Not available

### C. Manufacturer / Supplier / Distributor information

- Company name : GS Caltex Corporation
- Address : 508 Nonhyun-ro, Gangnam-gu, Seoul, Korea
- Emergency telephone number : 82-1544-5151
- Fax number : 82-1544-5151

## 2. HAZARD IDENTIFICATION

### A. GHS Classification

- Flammable liquids : Category4
- Acute toxicity (oral) : Category5
- Carcinogenicity : Category1B
- Acute aquatic toxicity : Category3
- Chronic aquatic toxicity : Category3

### B. GHS label elements

#### Hazard symbols



#### Signal words

- Danger

#### Hazard statements

- H227 Combustible liquid
- H303 May harmful if swallowed.
- H350 May cause cancer
- H402 Harmful to aquatic organisms.
- H412 Harmful to aquatic life with long lasting effects

#### Precautionary statements

##### 1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

##### 2) Response

- P308+P313 If exposed or concerned: Get medical advice/attention.

- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

### 3) Storage

- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

### 4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

## C. Other hazards which do not result in classification : (NFPA Classification)

### ○ NFPA grade (0 ~ 4 level)

- Health : 0, Flammability : 2, Reactivity : 0

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Clarified oils (petroleum), catalytic cracked	-	64741-62-4	>96
Sulfur, precipitated, sublimed or colloidal	-	7704-34-9	<4

## 4. FIRST AID MEASURES

### A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.

### B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Remove contaminated clothing, shoes and isolate.
- Wear gloves when washing the patient, and please avoid contact with contaminated clothing.

### C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

### D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

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

- Not available

### F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

## 5. FIREFIGHTING MEASURES

### A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

### B. Specific hazards arising from the chemical

- Not available

### C. Special protective actions for firefighters

- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.

## 6. ACCIDENTAL RELEASE MEASURES

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

- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Remove all sources of ignition.
- Do not direct water at spill or source of leak.
- Cleanup and disposal under expert supervision is advised.
- Keep unauthorized people away, isolate hazard area and deny entry.

### B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

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

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.
- Prevent the influx to waterways, sewers, basements or confined spaces.
- Spilled material should be treated as a potential risk of waste collected.

## 7. HANDLING AND STORAGE

### A. Precautions for safe handling

- Get the manual before use.
- Refer to Engineering controls and personal protective equipment.
- Dealing only with a well-ventilated place.
- Operators should wear antistatic footwear and clothing.
- Do not inhale the steam prolonged or repeated.
- Contaminated work clothing should not be allowed out of the workplace.

### B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not use damaged containers.
- Avoid direct sunlight.
- Keep sealed when not in use.
- Prevent static electricity and keep away from combustible materials or heat sources.
- By specifying a storage area for carcinogenic substances.
- Collected them in sealed containers.
- Store away from water and sewer.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**A. Exposure limits**

- ACGIH TLV**
  - Not available
- OSHA PEL**
  - Not available

**B. Engineering controls**

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

**C. Individual protection measures, such as personal protective equipment**

- Respiratory protection**
  - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
  - Respiratory protection is ranked in order from minimum to maximum.
  - Consider warning properties before use.
  - Any chemical cartridge respirator with organic vapor cartridge(s).
  - Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
  - Any air-purifying respirator with a full facepiece and an organic vapor canister.
  - For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Eye protection**
  - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
  - Provide an emergency eye wash station and quick drench shower in the immediate work area.
- Hand protection**
  - Wear appropriate chemical resistant glove.
- Skin protection**
  - Wear appropriate chemical resistant protective clothing.
- Others**
  - Not available

**9. PHYSICAL AND CHEMICAL PROPERTIES**

A. Appearance	
- Appearance	Liquid
- Color	Not available
B. Odor	Not available
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	84 °C
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	Not available
M. Vapour density	Not available
N. Specific gravity(Relative density)	1.1359 @15 °C
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	505.8 @50°C
S. Molecular weight	Not available

**10. STABILITY AND REACTIVITY****A. Chemical Stability**

- This material is stable under recommended storage and handling conditions.

#### B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

#### C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

#### D. Incompatible materials

- Not available

#### E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

### 11. TOXICOLOGICAL INFORMATION

#### A. Information on the likely routes of exposure

- (Respiratory tracts)**
  - Not available
- (Oral)**
  - May harmful if swallowed.
- (Eye-Skin)**
  - Not available

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

- Acute toxicity**
  - \* **Oral**
    - Product (ATEmix) : 2000mg/kg < ATEmix <= 5000mg/kg
    - [Clarified oils (petroleum), catalytic cracked] : LD50 4300 mg/kg Rat
    - [Sulfur, precipitated, sublimed or colloidal] : LD50 > 5000 mg/kg Rat
  - \* **Dermal**
    - Product (ATEmix) : >5000mg/kg
    - [Clarified oils (petroleum), catalytic cracked] : LD50 > 2000 mg/kg Rat
    - [Sulfur, precipitated, sublimed or colloidal] : LD50 > 2000 mg/kg Rabbit
  - \* **Inhalation**
    - Not available
- Skin corrosion/irritation**
  - Not available
- Serious eye damage/irritation**
  - Not available
- Respiratory sensitization**
  - Not available
- Skin sensitization**
  - Not available
- Carcinogenicity**
  - \* **IARC**
    - Not available
  - \* **OSHA**
    - Not available
  - \* **ACGIH**
    - Not available
  - \* **NTP**
    - Not available
  - \* **EU CLP**
    - [Clarified oils (petroleum), catalytic cracked] : Carc. 1B
- Germ cell mutagenicity**
  - Not available

- **Reproductive toxicity**
  - Not available
- **STOT-single exposure**
  - Not available
- **STOT-repeated exposure**
  - Not available
- **Aspiration hazard**
  - Not available

## 12. ECOLOGICAL INFORMATION

### A. Ecotoxicity

- **Fish**
  - [Clarified oils (petroleum), catalytic cracked] : LC50 48 mg/l 96 hr Brachydanio rerio (IUCLID)
  - [Sulfur, precipitated, sublimed or colloidal] : LC50 866 mg/l 96 hr Brachydanio rerio (UBA, IUCLID)
- **Crustaceans**
  - [Sulfur, precipitated, sublimed or colloidal] : EC50 ≥ 5000 mg/l 48 hr Daphnia magna (ECOTOX)
- **Algae**
  - [Clarified oils (petroleum), catalytic cracked] : EC50 160 mg/l 96 hr Skeletonema costatum (IUCLID)

### B. Persistence and degradability

- **Persistence**
  - [Clarified oils (petroleum), catalytic cracked] : log Kow 6.13 (Exp, episuite)
  - [Sulfur, precipitated, sublimed or colloidal] : log Kow = 0.23
- **Degradability**
  - Not available

### C. Bioaccumulative potential

- **Bioaccumulative potential**
  - Not available
- **Biodegradation**
  - [Clarified oils (petroleum), catalytic cracked] : 11 (%) 28 day (Aerobic, Industrial wastewater contaminated with oil, very slowly decomposes)

### D. Mobility in soil

- Not available

### E. Other adverse effects

- Not available

## 13. DISPOSAL CONSIDERATIONS

### A. Disposal methods

- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.
- Incinerate the oil by separating the oil and water
- The remainder of the water after separation will be processed in a water pollution prevention facilities.
- Do incineration or stabilization of the residue after disposal as the method of evaporation and concentration.
- Do incineration of the residue after disposal as the method of agglomeration and precipitation.
- Take care of incinerate or stabilization after treatment, purified by means of Separation•distillation•extractio•filtration•pyrolysis

### B. Special precautions for disposal

- The user of this product must dispose by oneself or entrust it to a waste disposer, a person who recycles other's waste or establishes and operates waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

**14. TRANSPORT INFORMATION****A. UN No. (IMDG CODE/IATA DGR)**

- Not applicable

**B. Proper shipping name**

- Not applicable

**C. Hazard Class**

- Not applicable

**D. IMDG CODE/IATA DGR Packing group**

- Not applicable

**E. Marine pollutant**

- Not applicable

**F. Special precautions for user related to transport or transportation measures**

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available
- Air transport(IATA): Not subject to IATA regulations.

**15. REGULATORY INFORMATION****A. National and/or international regulatory information**

- POPs Management Law**
  - Not applicable
- Information of EU Classification**
  - \* **Classification**
    - [Clarified oils (petroleum), catalytic cracked] : H350
    - [Sulfur, precipitated, sublimed or colloidal] : H315
- U.S. Federal regulations**
  - \* **OSHA PROCESS SAFETY (29CFR1910.119)**
    - Not applicable
  - \* **CERCLA Section 103 (40CFR302.4)**
    - Not applicable
  - \* **EPCRA Section 302 (40CFR355.30)**
    - Not applicable
  - \* **EPCRA Section 304 (40CFR355.40)**
    - Not applicable
  - \* **EPCRA Section 313 (40CFR372.65)**
    - Not applicable
- Rotterdam Convention listed ingredients**
  - Not applicable
- Stockholm Convention listed ingredients**
  - Not applicable
- Montreal Protocol listed ingredients**
  - Not applicable

**16. OTHER INFORMATION****A. Reference**

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

**B. Issue date**

- 2012-08-09

**C. Revision number and Last date revised**

- 3 times, 2019-02-07

**D. Other**

- This SDS is prepared according to the Globally Harmonized System (GHS).

