



**HINDUSTAN PETROLEUM CORPORATION LIMITED**  
**MUMBAI REFINERY**  
**MATERIAL SAFETY DATA SHEET COMPENDIUM**

Document Title: MSDS Compendium, Mumbai Refinery

Edition: 1

### **6.27 MSDS of LSHS**

#### **Section 1: Chemical Product and Company Identification**

##### **1.1 Chemical Product Identifiers:**

1.1.1 Chemical Name	Low Sulphur Heavy Stock
1.1.1.1 Trade Name	LSHS
1.1.2 CAS No.	97862-78-7

##### **1.2 Relevant identified uses of the chemical product and uses advised against**

Relevant identified uses	Industrial use
Uses advised against	Not Available

##### **1.3 Details of the supplier of the safety data sheet**

1.3.1 Company Name	Hindustan Petroleum Corporation Limited
1.3.2 Address	HPCL Mumbai Refinery, B D Patil Marg Chembur, Mumbai-400074
1.3.3 Contact No.	022-25076605
1.3.4 Contact person in emergency	Fire & Safety Shift Supervisor
<b>1.4 Emergency Telephone No.:</b>	022-25076606

#### **Section 2: Hazards Identification**

##### **2.1 Classification of the chemical product:**

<b>Hazard class</b>	<b>Category</b>	<b>Hazard class &amp; category</b>	<b>Hazard statement</b>
Flammable liquid	4	Flam. Liq. 4	H227
Skin corrosion/irritation	2	Skin Irrit. 2	H315
Reproductive toxicity	2	Repr. 2	H361f
Carcinogenicity	1	Carc. 1	H350
Specific target organ toxicity - repeated exposure	2	STOT RE 2	H373
Hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410
Acute toxicity	4	Acute Tox. 4	H332

**For full text of abbreviations: see SECTION 16**

##### **The most important adverse physicochemical, human health and environmental effects**

Delayed or immediate effects can be expected after short or long-term exposure. The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.



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## 2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

### 2.2.1 GHS pictograms:



### 2.2.2 Signal Word(s): Danger

### 2.2.3 Hazard Statements(s):

H227	Combustible liquid
H315	Causes skin irritation
H332	Harmful if inhaled
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled)
H410	Very toxic to aquatic life with long lasting effects

### 2.2.4 Precautionary Statement(s):

Precautionary statements - prevention	
<b>P201</b>	Obtain special instructions before use
<b>P202</b>	Do not handle until all safety precautions have been read and understood
<b>P264</b>	Wash hands thoroughly after handling
<b>P210</b>	Keep away from heat/sparks/open flames/hot surfaces. No smoking
<b>P233</b>	Keep container tightly closed
<b>P240</b>	Ground and bond container and receiving equipment
<b>P241</b>	Use explosion-proof electrical/ ventilating/ lighting equipment
<b>P242</b>	Use non-sparking tools
<b>P243</b>	Take action to prevent static discharges
<b>P280</b>	Wear protective gloves/eye protection
<b>P271</b>	Use only outdoors or in a well-ventilated area.
<b>P261</b>	Avoid dust/fume/gas/mist/vapours/spray.. breathing
<b>P273</b>	Avoid release to the environment



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<b>Precautionary statements – response</b>	
<b>P303+P361+P353</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
<b>P370 + P378</b>	In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish
<b>P308+P313</b>	IF exposed or concerned: Get medical advice/attention
<b>P332+P313</b>	If skin irritation occurs: Get medical advice/attention.

**2.3 Other hazards except those mentioned in DGCPL Rules, 201:**  
**Results of PBT and vPvB assessment**  
According to the results of its assessment, this substance is not a PBT or a vPvB.

**Section 3: Composition/Information on Ingredients**

**3.1 Name of Product:** LSHS

**3.1.1 Systematic Chemical Name or Trivial Name:** Low Sulphur Heavy Stock

**3.1.2 CAS No.:** 97862-78-7

**Section 4: First-Aid Measures**

**4.1 Description of first aid measures**



**4.1.1 Inhalation**

Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.

**4.1.2 Skin Contact**

Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician. For thermal burns, cool affected areas as quickly as possible by immersing in water. Consult a physician.

**4.1.3 Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately. If burns occur, treat as thermal burns.

**4.1.4 Ingestion**

If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting. Prevent vomiting if possible. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person.

**4.2 Most important symptoms and anticipated effects both acute and delayed**



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Refer to SECTION 11

**4.3 Advice for immediate medical attention and special treatment needed**

None

**Section 5: Firefighting Measures**

**5.1 Extinguishing Media**



- **Suitable extinguishing media**  
Water spray. Foam. Dry powder. Carbon dioxide (CO<sub>2</sub>).

**5.2 Special hazards arising from the chemical product:**

Do not allow run-off from firefighting to enter drains or water courses.

**5.3 Hazardous Combustion Products:**

In case of fire may be liberated: Carbon oxides. Hydrocarbons

**5.4 Specific Extinguishing Methods**

For this substance/mixture no limitations of extinguishing agents are given

**5.4.1 Advice for Fire-Fighters**

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

**5.4.2 Special protective equipment for fire-fighters: None**

**Section 6: Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures:**



Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapours or spray mist.

**6.2 Environmental precautions:**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

**6.3 Methods and materials for containment and cleaning up:**

Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections:**

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.



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### **Section 7: Handling and Storage**

#### **7.1 Precautions for Safe Handling:**

Ensure adequate ventilation. Do not breathe vapours or spray mist. Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred. Wear personal protective equipment.

#### **Measures to prevent fire as well as aerosol and dust generation**

Keep away from open flames, hot surfaces and sources of ignition.



#### **7.2 Conditions for Safe Storage, including requirement of hazardous area classification and any incompatibilities:**

Keep containers tightly closed in a cool, well-ventilated place.

#### **Consideration of other advice:**

Keep away from oxidizing agents, and acidic or alkaline products.

### **Section 8: Exposure Controls and Personal Protection**

#### **8.1 Control Parameters**

**Engineering measures:** Provide sufficient air exchange and/or exhaust in work rooms.

#### **8.2 Exposure Controls**

##### **8.2.1 Personal Protective Equipment:**

Use of PPE to be ensured by working crew for exposure control. Different PPEs for exposure control of different body parts is described in the next section.

##### **8.2.2 Suggestions for protection of eye, skin and body and respiratory system:**

- **Eye/face protection**



Use safety goggle with side protection.

- **Skin protection**



##### **a. Hand protection**

Impervious gloves



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**Hygiene measures:** Wash hands before breaks and immediately after handling the product.

### **Section 9: Physical and Chemical Properties**

#### **9.1 Information on basic physical and chemical properties**

Physical state	liquid
Colour	Black dark green Dark brown
Odour	Petroleum
Melting point/freezing point	No data available
Boiling point or initial boiling point and boiling range	> 450 °C
Flammability	No data available
Lower and upper explosion limit	No data available
Flash point	90 °C
Auto-ignition temperature	No data available
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	30 - 70 mm <sup>2</sup> /s; 50 °C
<b><u>Solubility(ies)</u></b>	
Water solubility	Insoluble
<b><u>Partition coefficient</u></b>	
Partition coefficient n-octanol/water (log value):	No data available
Soil organic carbon/water (log KOC)	No data available
Vapour pressure	No data available
<b><u>Density and/or relative density</u></b>	
Density	0.94 g/cm <sup>3</sup> ; 20 °C
Relative vapour density	No data available
Particle characteristics	not relevant (liquid)
<b><u>Other safety parameters</u></b>	
Oxidising properties	none

#### **9.2 Other Information:**

**Information with regard to physical hazard classes:**

There is no additional information.

### **Section 10: Stability and Reactivity**

#### **10.1 Reactivity**

Stable under normal conditions.



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**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

None known

**10.4 Conditions to avoid**

Heat, flames and sparks.

**10.5 Incompatible materials**

Strong acids and oxidizing agents

**10.6 Hazardous decomposition products**

Hazardous combustion products: see section 5.

**Section 11: Toxicological Information**

**11.1 Information on Toxicological Effects:** Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**  
No data available
- **If in eyes**  
No data available
- **If inhaled**  
No data available
- **If on skin**  
No data available
- **Other information**  
None

**11.1.1 Acute Toxicity:**

Exposure route	Endpoint	Value	Species
Inhalation	LC50	4.8 mg/l/4h	rat
Oral	LD50	> 2000 mg/kg	rat
Dermal	LD50	>2000 mg/kg	rabbit

**11.1.2 Skin Corrosion/ Irritation:** Moderately irritating

**11.1.3 Serious Eye Damage/ Eye Irritation:** Shall not be classified as seriously damaging to the eye or eye irritant.

**11.1.4 Respiratory or Skin Sensitization:** Shall not be classified as a respiratory or skin sensitizer



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**11.1.5 Mutagenicity:** Shall not be classified as germ cell mutagenic.

**11.1.6 Carcinogenicity:** Shall not be classified as carcinogenic.

**11.1.7 Reproductive Toxicity:** No data available

**11.1.8 Specific target organ toxicity-single exposure:** No data available.

**11.1.9 Specific target organ toxicity - repeated exposure:** No data available

**11.1.10 Aspiration Hazard:** No data available

**11.1.11 Additional Information:** There is no additional information.

### Section 12: Ecological Information

**12.1 Toxicity:** Toxic to aquatic life with long lasting effects.

#### Aquatic toxicity (acute)

Endpoint	Value	Species	Source	Exposure time
LL50	12.51 mg/l	fish	ECHA	96 h
EL50	21.85 mg/l	aquatic invertebrates	ECHA	48 h

**12.2 Persistence and Degradability:** Expected to be biodegradable

**12.3 Bio Accumulative Potential:** No data available

**12.4 Mobility in Soil:** No data available

**12.5 Other adverse effects:** Data are not available

### Section 13: Disposal considerations

**13.1 Waste Treatment Method:** Dispose of in accordance with local regulations.



### Section 14: Transport Information

**14.1 UN Number:** UN 3082

**14.2 UN Proper Shipping Name:** LSHS

**14.3 Transport Class(es):** Not Classified

**14.4 Packaging Group:** III

**14.5 Environmental Hazards:** Yes

**14.6 Special Precautions for User:** Provisions for dangerous goods (ADR) should be complied within the premises.





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**Section 15: Regulatory Information**

**15.1 Safety, health and Environmental:** Regulations/legislation specific for the substance or mixture relevant provisions of **Non - Toxic/Flammable Substance** are applicable

**Section 16: Other Information**

**16.1 Date of Issue:** March 2023

**16.2 Necessity of Specific Training:** Working and handling personnel to be trained on following aspects

- i. Chemical hazard awareness
- ii. Safety control measures including PPE
- iii. Housekeeping, hygiene and chemical storage
- iv. Responding to any kind of emergency

**16.3 Disclaimer:** This M.S.D.S and the information it contains is offered to you in good faith as accurate. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents.