



HINDUSTAN PETROLEUM CORPORATION LIMITED
MUMBAI REFINERY
MATERIAL SAFETY DATA SHEET COMPENDIUM

Document Title: MSDS Compendium, Mumbai Refinery

Edition: 1

6.5 MSDS of Naphtha

Section 1: Chemical Product and Company Identification

1.1 Chemical Product Identifiers:

1.1.1 Chemical Name	Naphtha
1.1.1.1 Trade Name	Naphtha
1.1.2 CAS No.	64741-46-4

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

Relevant identified uses	Raw material for industry Petroleum Petroleum products
Uses advised against	No data 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
1.4 Emergency Telephone No.:	022-25076606

Section 2: Hazards Identification

2.1 Classification of the chemical product:

Hazard class	Category	Hazard class & category	Hazard statement
Flammable liquid	1	Flam. Liq. 1	H224
Skin corrosion/irritation	2	Skin Irrit. 2	H315
Reproductive toxicity	2	Repr. 2	H361fd
Specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336
Specific target organ toxicity - repeated exposure	2	STOT RE 2	H373
Aspiration hazard	1	Asp. Tox. 1	H304
Hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411
Germ cell mutagenicity	1B	Muta. 1B	H340
Carcinogenicity	1B	Carc. 1B	H350

2.2 Label Elements

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



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2.2.1 GHS pictograms:



GHS02

GHS07

GHS08

GHS09

2.2.2 Signal Word(s): Danger

2.2.3 Hazard Statements(s):

H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H361fd	Suspected of damaging fertility
H373	May cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled)
H340	May cause genetic defects
H350	May cause cancer
H411	Toxic to aquatic life with long lasting effects

2.2.4 Precautionary Statement(s):

Precautionary statements - prevention	
P201	Obtain special instructions before use
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P273	Avoid release to the environment
P280	Wear eye protection, face protection, protective clothing, protective gloves
Precautionary statements – response	
P301+P310+P331	IF SWALLOWED: Immediately call a doctor, a POISON CENTER. Do NOT induce vomiting
P403+P233	Store in a well-ventilated place. Keep container tightly closed

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: Naphtha



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3.1.1 Systematic Chemical Name or Trivial Name: Naphtha

3.1.2 CAS No.: 64741-46-4

3.1.3 Other Identifiers

Molar mass 101-215 g/mol

Section 4: First-Aid Measures

4.1 Description of first aid measures



4.1.1 Inhalation

Keep at rest. Provide fresh air. Give oxygen or artificial respiration if necessary. Call a physician immediately.

4.1.2 Skin Contact

Take off immediately all contaminated clothing. Wash with plenty of water/. In case of doubt or persistent symptoms, consult always a physician. Wash contaminated clothing before reuse.

4.1.3 Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

4.1.4 Ingestion

Do Not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and anticipated effects both acute and delayed

Mental confusion, Irritation, Dizziness, Drowsiness, Cough, Headache, Erythema

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, Alcohol resistant foam, Carbon dioxide, Dry extinguishing powder

- **Unsuitable extinguishing media**

Strong water jet



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5.2 Special hazards arising from the chemical product:

Heating causes rise in pressure with risk of bursting. Vapours may form explosive mixture with air. Vapours are heavier than air and may spread along floors. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours. As appropriate. Hydrogen sulphide (H₂S). Sulphur oxides. Sulphuric acid. Do not allow run-off from fire-fighting to enter drains or water courses.

5.3 Hazardous Combustion Products:

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂)

5.4 Specific Extinguishing Methods

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

5.4.1 Advice for Fire-Fighters

Special protective equipment for firefighters. In case of fire: Wear self-contained breathing apparatus. Use water spray or fog for cooling exposed containers. Evacuate personnel to a safe area. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

5.4.2 Special protective equipment for fire-fighters: None

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:



Advice for non-emergency personnel: Evacuate personnel to a safe area. Stay upwind/keep distance from source. Provide adequate ventilation.

6.2 Environmental precautions:

Do not allow to enter into surface water or drains

6.3 Methods and materials for containment and cleaning up:

Advice on how to contain a spill

Stop leak if safe to do so. Dam up

Advice on how to clean up a spill

Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Collect in closed and suitable containers for disposal.

Other information relating to spills and releases

Dispose of as special waste in compliance with local and national regulations

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.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling:

Provision of sufficient ventilation. Avoid exposure.



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Measures to prevent fire as well as aerosol and dust generation

Keep away from sources of ignition - No smoking



Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Measures to protect the environment

Avoid release to the environment.

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

Storage of flammable liquids. Keep container tightly closed in a cool, well-ventilated place

Incompatible substances or mixtures

Oxidising substances

Consideration of other advice:

A specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances.

Ventilation requirements

Use local and general ventilation.

Section 8: Exposure Controls and Personal Protection

8.1 Control Parameters

National Limit Values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling g-C [ppm]	Ceiling g-C [mg/m ³]	Notation	Source
EU	Naptha	64741-46-4	IOELV	20	72						
IE	Naptha	64741-46-4	OELV	20	72						



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Notation

- **Ceiling-C:** Ceiling value is a limit value above which exposure should not occur
- **STEL:** Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15- minute period (unless otherwise specified)
- **TWA:** Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours' time-weighted average (unless otherwise specified)

8.2 Exposure Controls

8.2.1 Personal Protective Equipment:

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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

Wear chemically resistant gloves.

b. Type of material

NBR (Nitrile rubber)

c. Material thickness

≥ 0.28 – 0.54 mm

d. Breakthrough times of the glove material

>480 minutes (permeation: level 6)

e. Other protection measures

The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves.



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- **Respiratory protection:** Respiratory protection necessary at: Aerosol or mist formation.
Type: A



Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	like: - petroleum hydrocarbon odour
Melting point/freezing point	< -20 °C
Boiling point or initial boiling point and boiling range	30 - 190 °C
Flammability	Not applicable, liquid
Lower and upper explosion limit	0.8 vol% (LEL) – 5.0 vol% (UEL)
Flash point	≤ 0 °C (closed cup)
Auto-ignition temperature	200 - 230 °C
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	0.5 – 0.6 mm ² /s (@ 20°C)
<u>Solubility(ies)</u>	
Water solubility	Insoluble
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	2.7
Vapour pressure	12 PSI 37.8°C
<u>Density and/or relative density</u>	
Density	0.74 g/ml (@ 15 °C)
Relative vapour density	3.5 (air = 1)
Particle characteristics	not relevant (liquid)
<u>Other safety parameters</u>	
Oxidising properties	none

9.2 Other Information:

Information with regard to physical hazard classes:

There is no additional information.



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Section 10: Stability and Reactivity

10.1 Reactivity

Extremely flammable liquid and vapour.

10.2 Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3 Possibility of hazardous reactions

Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

10.5 Incompatible materials

Oxidising substances.

10.6 Hazardous decomposition products

Carbon oxides. As appropriate: Hydrogen sulphide (H₂S). SO_x. Sulphuric acid: see section 5.

Section 11: Toxicological Information

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

11.1.1 Acute Toxicity:

Exposure route	Endpoint	Value	Species
Inhalation	LC50	> 5610 mg/m ³	rat
Oral	LD50	> 5000 mg/kg	rat
Dermal	LD50	> 2000 mg/kg	rabbit

11.1.2 Skin Corrosion/ Irritation: Causes skin irritation.

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

11.1.5 Mutagenicity: May cause genetic defects.

11.1.6 Carcinogenicity: May cause cancer.

11.1.7 Reproductive Toxicity: Suspected of damaging fertility.

11.1.8 Specific target organ toxicity-single exposure: May cause drowsiness or dizziness.

11.1.9 Specific target organ toxicity - repeated exposure: Not classified

11.1.10 Aspiration Hazard: May be fatal if swallowed and enters airways.

11.1.11 Additional Information: There is no additional information.



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Section 12: Ecological Information

12.1 Toxicity: Not Classified.

12.2 Persistence and Degradability: No data available

12.3 Bio Accumulative Potential: The substance fulfils the very bio accumulative criterion.

n-octanol/water (log KOW)	2.1
BCF	3.5 – 4.4

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: This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.



- **Sewage disposal-relevant information**
Do not allow to enter into surface water or drains.

13.1.1 Contaminated Packaging: Handle with care.

13.1.2 Local Regulations (if any) on Disposal: Waste material must be disposed of in accordance with the **Hazardous Waste Management Rules-2016**

Section 14: Transport Information

14.1 UN Number: UN 1255

14.2 UN Proper Shipping Name: Naphtha

14.3 Transport Class(es): 3

14.3.1 Hazard Labels: 3

14.3.2 Symbols:



14.4 Packaging Group: I

14.5 Environmental Hazards: No



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

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.