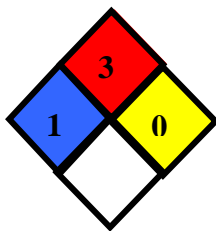


# SAFETY DATA SHEET

BPCL KOCHI REFINERY



NFPA 704 (Sec 16)

## Naphtha

### Section 1 – IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY / UNDERTAKING

Chemical Name	Naphtha	CAS Number:	8032-32-4
Product name	Naphtha	UN No.	1993
Chemical Formula	Complex mixture of hydrocarbons	Synonyms	Special Cut Naphtha, Petrochemical feed, Light Naphtha, Straight Run Naphtha, Hydrocracked naphtha, Reformed Naphtha, Hydrotreated Naphtha, Alkylate Naphtha, Petroleum Naphtha, Petroleum ether
Hazchem No.		Hazardous waste ID No.	
Product use	Petrochemicals, Fuel		
Manufacturer's name	Bharat Petroleum Corporation Limited		
Address	Kochi Refinery, Ambalmugal, Ernakulam 682302		
Contact information			

### Section 2 – Composition / Information on ingredients

Composition:	Mixture of hydrocarbons	
Hazardous Components:	All components non-toxic but highly inflammable	
<b>Component</b>	<b>% weight</b>	<b>CAS No.</b>
Naphtha	0 to 100 % w	8030-30-6
n-pentane	0 to 10 % w	109-66-0
i-pentane	0 to 10 % w	78-78-4
n-hexane	0 to 15 % w	110-54-3
Methyl cyclohexane	0 to 10 % w	108-87-2
n-heptane	0 to 15 % w	142-82-5
Heptane isomers	0 to 10 % w	107-83-5
Toluene	0 to 8 % w	108-88-3
benzene	0 to 5 % w	71-43-2

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## Section 3 – Hazards Identification

Primary Entry Routes	Inhalation, skin, eyes and ingestion			
Acute Health Effects	Inhalation can cause unconsciousness which may go to coma. Stentorious breathing and bluish tint to the skin. Ingestion in mild form, intoxication resembles drunkenness. Sometimes headache, lack of appetite, dizziness, sleeplessness, indigestion and nausea. Chemical pneumonitis results if aspirated during ingestion or while vomiting. Can cause systemic effects after repeated exposure. Causes irritation to the skin. Prolonged or repeated contact results in dry scaly skin and development of dermatitis. Eye irritant			
Chronic Effects	No data available			
Carcinogenicity	Not listed as carcinogenic			
NFPA hazard signals	Flammability	Health	Reactivity	Special
	3	1	0	
Other (Specify)				

## Section 4 – First Aid Measures

Eyes:	Flush with water for 15 min. Get medical attention.
Skin:	Wash with warm water & soap.
Inhalation:	Remove to fresh air. Consult a physician if irritation persists.
Ingestion:	Do not induce vomiting Olive oil or any other vegetable oil should be given orally to retard absorption of naphtha. Get medical help at once.

## Section 5 – Fire fighting measures

Flash Point	< - 10 °C	Auto ignition Temperature	229 °C to 293 °C
Flash Point Method	Abel	TDG Flammability Classification	
LEL	1.1 %	UEL	9.0 %
Combustible liquid		Explosive material	
Corrosive material		Flammable material	Flammable
Oxidiser		Pyrophoric material	
Organic peroxide		Explosion sensitivity to impact	
Explosion sensitivity to static electricity		Hazardous polymerisation	
Extinguishing Media	Foam, Dry Chemical Powder, CO2		
Fire or Explosion Hazards	Heat produces vapours and can cause violent rupture of containers		
Hazardous combustion Products	Carbon di oxide, carbon mono oxide		
Fire-Fighting Instructions and procedures	Flashback may occur along vapour trail. Fire fighters should wear self-breathing apparatus while fighting fire.		

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## Section 6 – Accidental Release Measures

Small Spills	Shut off leaks without risk. Absorb on sand or earth.
Containment	Prevent spillage from entering drains or water sources
Clean-up	After spills wash area with soap and water preventing runoff from entering drains:
Other (Specify)	

## Section 7 – Handling and Storage

Handling Precautions	Do not use/store near heat/open flame. Avoid breathing harmful vapors. Avoid contact with skin and eyes. Wash thoroughly after handling
Storage Requirements	Do not use/store near heat/open flame/water/acids

## Section 8 – Exposure Controls / Personal Protection

Engineering Controls	Provide proper ventilation for environment to be below TWA
Gloves (Specify)	
Respiratory Protection (Specify)	Use respiratory protection if ventilation is improper
Eye (Specify)	
Foot wear (Specify)	
Protective clothing/ Equipment (Specify)	Use face shield, PVC gloves, safety boots while handling. Contaminated clothing to be immediately removed.
Other(Specify)	

## Section 9 – Physical and Chemical properties

Physical State	Liquid
Appearance	Water white liquid
Odour	hydrocarbon like odour
Vapour Pressure	LAN - < 12.1 psi and HAN - < 9.9 psi at 38 °C
Specific Gravity (Specify at what temp)	LAN – 0.68 to 0.75 and HAN – 0.68 to 0.77 gm / cc at 15 °C
Water Solubility (Specify at what temp)	Insoluble
Evaporation rate	
Boiling Point	34 °C to 180 °C
Melting Point	
Vapour Density	2.5 to 4.8 (Air = 1)
pH	

## Section 10 – Stability and Reactivity

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Chemical Stability (If no, under what conditions)	Chemically stable.
Chemical Incompatibilities (If yes, which ones)	Incompatible with oxidizing agents & chlorine. Reacts vigorously with oxidizing materials.
Conditions to Avoid	Can undergo auto-oxidation in air & generate heat which can build up in a confined space to cause spontaneous combustion
Hazardous Decomposition Products	Carbon di oxide, carbon mono oxide

## Section 11 – Toxicological Information

TLV – TWA as per ACIGH/NIOSH	500 ppm(TWA)
STEL	
LD 50 (Specify species and route)	
LC 50 (Specify species and route)	
Acute Inhalation Effects	Inhalation of concentrated vapor may cause intoxication

## Section 12 – Ecological Information

Prevent spillage from entering drains or water sources. After spills wash area with soap and water preventing runoff from entering drains. Can burn with lot of heat producing CO<sub>2</sub> and CO.

## Section 13 – Disposal Considerations

Disposal	Seal all the waste in vapour tight plastic bags for eventual disposal or incineration.
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## Section 14 – Transport Information

Shipping Name	Naphtha
Special shipping information/ instructions	

## Section 15 – Regulatory Information

Non – Toxic/Flammable Substance

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## Section 16 – Other Information

Two types of naphtha are produced depending on the Aromatic content. Low Aromatic Naphtha (LAN) has aromatic content < 10 %V and HAN has > 12 %v. Both LAN and HAN have different grades of naphtha depending on different customer requirements.

Prepared by BPCL Kochi Refinery

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### Notes:

1. CAS No. – Chemical Abstract Service Number
2. UN No. – United Nations Number
3. TDG flammability – Transport of Dangerous Goods Flammability classification by United Nations.