



MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT DETAILS

Product Name: BPCL D130

Product Description: Hydrotreated Petroleum Distillates/ Dearomatic Hydrocarbons

Recommended Use: Solvent

COMPANY IDENTIFICATION

Supplier: Bharat Petroleum Corporation Limited

Mumbai Refinery, Mahul, Chembur, Mumbai 400074

Supplier General Contact: +91 22-25533888 / 25533999 / 25524888 / 25524999

24 Hour Environmental / Health Emergency Telephone: +91 22-2271 3000/2271-4000

SECTION 2 HAZARDS IDENTIFICATION

The subjected material is hazardous according to regulatory guidelines (Refer SDS Section 15).

CLASSIFICATION:

Flammable liquid: Category 4. Aspiration toxicant: Category 1.

LABEL ELEMENTS

Pictograms:



Signal Word: Danger

Hazard Statements:

H227: Combustible liquid.

H304: May be fatal if swallowed and enters airways.

Precautionary Statements:

P210: Keep away from flames and hot surfaces. No smoking.

P280: Wear protective gloves and eye / face protection while handling.

P301 + P310: IF SWALLOWED: Immediately call a HOSPITAL/ doctor/physician.

P331: Do NOT induce vomiting.

P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish.

P403 + P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents and container in accordance with local regulations.

Contains: Mixture of hydrocarbons, DISTILLATES (PETROLEUM), HYDROTREATED LIGHT DISTILLATES (PETROLEUM), HYDROTREATED LIGHT HYDROCARBON

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

The subjected material can accumulate static charges which may cause an ignition. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Combustible.

HEALTH HAZARDS

May be irritating to the eyes, nose, throat, and lungs. Inhalation can cause dizziness, headache and nausea, depresses central nervous system and has an anesthetic. Continued inhalation can produce visual and auditory hallucinations. Human systemic effects by ingestion, somnolence, hallucinations & distortion perceptions, coughing, nausea or vomiting & fever. Aspiration of vomiting can cause serious pneumonitis particularly in young children. Skin irritant. Prolonged contact can result in skin drying and



dermatitis.

ENVIRONMENTAL HAZARDS

No significant hazards.

NOTE: Supplementary use of the material without expert concurrence should not allowed for any other purpose than the intended use as mentioned in Section 1. Health studies have shown that chemical exposure may cause potential human health risks as described in Health Hazard section which may also vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

The subjected material is defined as a complex mixture/substance.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT HYDROCARBON	64742-47-8	100 %	H227, H304

* All concentrations are depicted in percent by weight and Gas concentrations are in percent by volume. Concentration values may vary.

SECTION 4 FIRST AID MEASURES

INHALATION

Move to fresh air from exposed area. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance.

SKIN CONTACT

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If persistent irritation occurs, obtain medical attention. Wash clothing before reuse.

EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. If persistent irritation occurs, obtain medical attention

INGESTION

Obtain medical attention immediately. Do not induce vomiting unless directed to do so by a medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Dry chemical, alcohol-resistant foam or carbon dioxide. Water spray may only be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Inappropriate Extinguishing Media: Direct water streams

FIRE FIGHTING

Fire Fighting Instructions: Small fires can be extinguished by hand held extinguishers. Major fires may require withdrawal and allowing the tank to burn. Fire fighters should use personal protective equipments (PPEs) and in enclosed wear self-contained breathing apparatus (SCBA) while fighting fire. Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: FLAMMABLE.

Hazardous Combustion Products: Incomplete combustion products, Oxides of carbon, Smoke, Fume

FLAMMABILITY PROPERTIES

Flash Point [Method: ASTM D-92] : $\geq 100^{\circ}\text{C}$ (212°F)

Flammable Limits (Approximate volume in air): LEL: 0.6% UEL: 5.0%

Autoignition Temperature (Approximate): 250°C (482°F)



SECTION 6

ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In case of a spill or accidental release, shut off leaks without risk. Absorb on sand or earth. Prevent spillage from entering drains or water sources. Also, notify appropriate authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with skin and eyes. Ventilate area of leak or spill thoroughly. Do not breathe vapor. Remove all heat or ignition sources. Evacuate the area of all non-essential personnel. Shut off leaks, if possible without personal risk. To protect personnel, Personal protective equipment (PPE) is advised. Refer the Hazard Identification Section for Significant Hazards. Also refer Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Small Spill: Remove all ignition sources (no smoking, flares, sparks or flames in immediate area) and ventilate area. Evacuate all non-essential personnel. Stop leak if without risk. Dilute with water and mop up or absorb with an inert dry material and place in a sealable container. Label and seal waste containers for product recovery or appropriate disposal

Large Spill: For large liquid spills (say more than a drum), remove all ignition sources. Evacuate all non-essential personnel. Stop leak if possible and without risk. Do not flush away residues with water. Blanket spill with alcohol resistant foam to limit evaporation or dike area to contain spill and absorb with earth, sand or other non-combustible material. Transfer to a labeled, sealable container for product recovery or proper disposal. Wear appropriate protective clothing to minimize contact with skin. Allow residues to evaporate or soak up with a suitable absorbent material and dispose safely and appropriately

Water Spill: Leakage needs to be stopped, by performing this operation without risk. Also, removal from surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

The above mentioned recommendations for water/land spill are purely based on likely spill scenario for the subjected material; however, local geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. Thus, local experts should be consulted.

ENVIRONMENTAL PRECAUTIONS

Contain and recover liquid when possible with an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand or earth) and place in a chemical waste container. Do not use combustible materials such as saw dust. Use non-sparking tools and equipment. Prevent from spreading or entering into drains, ditches, rivers and other waterways by using sand, earth or other appropriate barriers.

SECTION 7

HANDLING AND STORAGE

HANDLING

Do not use/store near heat/open flame. Avoid contact with liquid or vapors. Avoid contact with skin and eye. Use gumboots, gloves while handling the product. Do not inhale. Stay upwind while handling the product. It should never be used to remove oil or grease from skin. It should not be siphoned by mouth. It should be stored in closed containers away from heat & source of ignition. Wash thoroughly after handling

Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance.



Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

Loading/Unloading Temperature: [Ambient/Room Temperature]

Transport Temperature: [Ambient/Room Temperature]

Transport Pressure: [Ambient/Room Temperature]

STORAGE

Do not use /store near heat/open flame/water/acids. The type of container used to store the material may affect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

Storage Temperature: [Ambient/Room Temperature]

Storage Pressure: [at Ambient/Room Temperature]

Suitable Containers/Packing: Drums; Tank Cars; Tank Trucks; Barges

Suitable Materials and Coatings (Chemical Compatibility): Teflon; Polyethylene; Polypropylene
 Carbon Steel; Stainless Steel

Unsuitable Materials and Coatings: Butyl Rubber; Polystyrene; Ethylene-propylene-diene monomer (EPDM); Natural Rubber

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards

Substance Name	Form	Limit/Standard			Note	Source
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT HYDROCARBON	Vapor	RCP	1200	LD50	Petroleum Hydrocarbons	Bharat Petroleum Corporation Limited
		- TWA	mg/m 3	(Oral Rat), 165 ppm		

NOTE: Limits/standards are shown for reference only and user has to follow applicable appropriate regulations.

ENGINEERING CONTROLS

An appropriate system for exhaust or adequate ventilation is recommended to keep employee exposures above the Exposure Limits. Typically, local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source. It is also recommended to use explosion-proof ventilation equipment.

PERSONAL PROTECTION

PPEs selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: Where local exhaust ventilation is not practicable, wear a full face-piece or a double cartridge respirator with organic vapor canister NPF 400. It may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, and whichever is the lowest. For emergencies or instances where the exposure levels are not known, use a full-face-piece positive-pressure, air-supplied respirator.

WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Hand Protection: PVC gloves, chemical resistant gloves, nitrile gloves are recommended based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions.



Eye Protection: Use chemical safety goggles with side shields or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin and Body Protection: Wear impervious protective clothing such as one-piece overall, including safety shoes or boots, gloves, laboratory coat, apron or any appropriate cotton-made clothing to prevent skin contact. Any specific clothing information provided is based on published literature or manufacturer data.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, smoking and/or any activity. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Always maintain and practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with most appropriate and applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

Physical State: Liquid

Appearance: Water white liquid. Characteristic Hydrocarbon like odour.

Odour: Mild Petroleum Solvent

Odour Threshold: N/D

Water Solubility: Insoluble

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Specific Gravity : 0.820 to 0.850

Sulphur: < 10 ppm

Aromatic Content: Max. 1 wt. %

Flammability (Solid, Gas): N/A

Flash Point [Method]: $\geq 100^{\circ}\text{C}$ (212°F) [ASTM D-92]

Autoignition Temperature: 250°C (482°F)

Boiling Point / Range: 275°C (527°F) - 320°C (608°F)

Decomposition Temperature: N/D

Vapour Density (Air = 1): > 1 at 101 kPa

Vapour Pressure: < 0.001 kPa at 20 °C

Viscosity: 4.0-4.2 cSt at 40°C

Pour Point: -6°C (21°F)

Melting Point: N/D

Molecular Weight: 230 [Approximate]

Hygroscopic: No

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): N/D

NOTE: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications.

SECTION 10 STABILITY AND REACTIVITY

STABILITY

Chemically stable under normal temperature and pressure for use and storage.

CHEMICAL INCOMPATIBILITIES/MATERIALS TO AVOID

Incompatible with oxidizing agents such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc. It reacts vigorously and may presents a serious explosion hazard 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

Thermal decomposition is highly dependent on conditions. A complex mixture of solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal and oxidative degradation. However, material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS

No hazardous polymerization.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Inhalation: Minimally toxic through inhalation and negligible hazard at ambient/normal handling temperatures.

Ingestion Toxicity: LD50 >15,000 mg/kg (Minimally Toxic. Based on test data for structurally similar materials.)

Skin Toxicity: LD50 >2,000 mg/kg (Minimally Toxic. Based on test data for structurally similar materials.)

Eye irritation: May cause mild, short-lasting discomfort to eyes.

Skin irritation: Moderately irritating to skin with prolonged exposure.

Respiratory toxicity: Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Human effects: Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

For the product itself: Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anaesthesia, drowsiness, unconsciousness and other central nervous system effects including death. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

OTHER HEALTH EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Anticipated health effects from sub-chronic, chronic, respiratory or skin sensitization, mutagenicity, reproductive toxicity, carcinogenicity, target organ toxicity (single exposure or repeated exposure), aspiration toxicity and other effects based on human experience and/or experimental data.

IARC Classification: The following ingredients are cited on the lists below: **None.**

--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

Not expected to be harmful to aquatic organisms and also not expected to demonstrate chronic toxicity to aquatic organisms. May cause long term adverse effects in the aquatic environment.

ENVIRONMENTAL FATE

Air: Material is highly volatile and will partition rapidly to air.

Soil: Adsorbs to soil and has low mobility

Water: Not expected to partition to sediments and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation: Expected to be readily biodegradable.

Bioaccumulation: Not expected to significantly bioaccumulate.

Hydrolysis: Transformation due to hydrolysis not expected to be significant.



Photolysis: Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation: Expected to degrade rapidly in air

OTHER ECOLOGICAL INFORMATION: VOC-YES

The above information given is based on data available for the material, the components of the material, and similar materials.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL RECOMMENDATIONS

Product disposal: Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. However, product is not suitable for disposal by either landfill or via local sewers, drains, natural streams or rivers. The following advice only applies to the product as supplied. Processing, use or contamination of this product may change the waste management options.

Waste disposal: Material cannot be saved for recovery or treating, it should be managed in an appropriate and approved waste disposal facility. Care should in any case be taken to ensure disposal is compliant with statutory or regulatory requirements and local environmental laws.

Empty Container disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not pressure cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Send to drum handlers that clean, recondition or metal reclaimer. Disposal of container and unused contents must be in accordance to local regulatory requirements and environmental laws.

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

SECTION 14 TRANSPORT INFORMATION

HAZARD CLASS

3 (Flammable Liquid) Packing Group II (Flash Point = -15 °C)

LAND: Not Regulated for Land Transport

SEA (MARPOL 73/78 Convention - Annex II)

Not Regulated for Sea Transport according to IMDG-Code (Marine Pollutant: No)

Proper shipping name:: Hydrocarbons Liquid/ NOXIOUS LIQUID/(BPCL D80, contains iso-and cycloalkanes (C12+)) Ship type: 3 Pollution category: Y

AIR (IATA): Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Hazardous Substance Act BE2535: Not Regulated

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECS, KECI, PICCS, TCSI, TSCA

This material is considered hazardous according to the classification criteria of the Hazard Classification and Communication System for Hazardous Materials BE 2555.

SECTION 16 OTHER INFORMATION

Compiled by: Bharat Petroleum Corporation Limited,
Corporate R&D Centre, Plot - 2A, Udyog Kendra, Surajpur Industrial area, Greater Noida - 201306
(U.P.)

Contact No. +91 120 – 235 4186

Disclaimer: This data sheet and the Health, Safety and environmental information is considered to be accurate as on the date specified. We have reviewed any information contained herein, which we received from sources outside BPCL. However, no warranty or representation, express or implied is made as to the accuracy or completeness of the data and information contained in this data sheet. Health & Safety precautions and environment advice noted in this data sheet may not be accurate for all



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SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT DETAILS

Product Name: BPCL D100

Product Description: Hydrotreated Petroleum Distillates/ Dearomatic Hydrocarbons

Recommended Use: Solvent

COMPANY IDENTIFICATION

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Supplier General Contact: +91 22-25533888 / 25533999 / 25524888 / 25524999

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LABEL ELEMENTS

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Signal Word: Danger

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P301 + P310: IF SWALLOWED: Immediately call a HOSPITAL/ doctor/physician.

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Other hazard information:

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EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. If persistent irritation occurs, obtain medical attention

INGESTION

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EXTINGUISHING MEDIA

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FIRE FIGHTING

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Unusual Fire Hazards: FLAMMABLE.

Hazardous Combustion Products: Incomplete combustion products, Oxides of carbon, Smoke, Fume

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Flash Point [Method: ASTM D-92] : $\geq 100^{\circ}\text{C}$ (212°F)

Flammable Limits (Approximate volume in air): LEL: 0.6% UEL: 5.0%

Autoignition Temperature (Approximate): 250°C (482°F)



SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In case of a spill or accidental release, shut off leaks without risk. Absorb on sand or earth. Prevent spillage from entering drains or water sources. Also, notify appropriate authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with skin and eyes. Ventilate area of leak or spill thoroughly. Do not breathe vapor. Remove all heat or ignition sources. Evacuate the area of all non-essential personnel. Shut off leaks, if possible without personal risk. To protect personnel, Personal protective equipment (PPE) is advised. Refer the Hazard Identification Section for Significant Hazards. Also refer Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

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Transport Temperature: [Ambient/Room Temperature]

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STORAGE

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Storage Temperature: [Ambient/Room Temperature]

Storage Pressure: [at Ambient/Room Temperature]

Suitable Containers/Packing: Drums; Tank Cars; Tank Trucks; Barges

Suitable Materials and Coatings (Chemical Compatibility): Teflon; Polyethylene; Polypropylene
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PPEs selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: Where local exhaust ventilation is not practicable, wear a full face-piece or a double cartridge respirator with organic vapor canister NPF 400. It may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, and whichever is the lowest. For emergencies or instances where the exposure levels are not known, use a full-face-piece positive-pressure, air-supplied respirator.

WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Hand Protection: PVC gloves, chemical resistant gloves, nitrile gloves are recommended based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions.



Eye Protection: Use chemical safety goggles with side shields or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin and Body Protection: Wear impervious protective clothing such as one-piece overall, including safety shoes or boots, gloves, laboratory coat, apron or any appropriate cotton-made clothing to prevent skin contact. Any specific clothing information provided is based on published literature or manufacturer data.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, smoking and/or any activity. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Always maintain and practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with most appropriate and applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

Physical State: Liquid

Appearance: Water white liquid. Characteristic Hydrocarbon like odour.

Odour: Mild Petroleum Solvent

Odour Threshold: N/D

Water Solubility: Insoluble

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Specific Gravity : 0.79 to 0.830

Sulphur: < 5 ppm

Aromatic Content: Max. 0.1 wt. %

Flammability (Solid, Gas): N/A

Flash Point [Method]: $\geq 100^{\circ}\text{C}$ (212 $^{\circ}\text{F}$) [ASTM D-92]

Autoignition Temperature: 250 $^{\circ}\text{C}$ (482 $^{\circ}\text{F}$)

Boiling Point / Range: 230 $^{\circ}\text{C}$ (446 $^{\circ}\text{F}$) - 270 $^{\circ}\text{C}$ (518 $^{\circ}\text{F}$)

Decomposition Temperature: N/D

Vapour Density (Air = 1): ~ 6.2 at 101 kPa

Vapour Pressure: < 0.01 kPa at 20 $^{\circ}\text{C}$

Viscosity: 3.0- 3.2 cSt at 25 $^{\circ}\text{C}$

Pour Point: -15 $^{\circ}\text{C}$ (5 $^{\circ}\text{F}$)

Melting Point: N/D

Molecular Weight: 205 [Approximate]

Hygroscopic: No

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): N/D

NOTE: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications.

SECTION 10 STABILITY AND REACTIVITY

STABILITY

Chemically stable under normal temperature and pressure for use and storage.

CHEMICAL INCOMPATIBILITIES/MATERIALS TO AVOID

Incompatible with oxidizing agents such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc. It reacts vigorously and may presents a serious explosion hazard 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

Thermal decomposition is highly dependent on conditions. A complex mixture of solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal and oxidative degradation. However, material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS

No hazardous polymerization.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Inhalation: Minimally toxic through inhalation and negligible hazard at ambient/normal handling temperatures.

Ingestion Toxicity: LD50 >15,000 mg/kg (Minimally Toxic. Based on test data for structurally similar materials.)

Skin Toxicity: LD50 >2,000 mg/kg (Minimally Toxic. Based on test data for structurally similar materials.)

Eye irritation: May cause mild, short-lasting discomfort to eyes.

Skin irritation: Moderately irritating to skin with prolonged exposure.

Respiratory toxicity: Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Human effects: Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

For the product itself: Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anaesthesia, drowsiness, unconsciousness and other central nervous system effects including death. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

OTHER HEALTH EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Anticipated health effects from sub-chronic, chronic, respiratory or skin sensitization, mutagenicity, reproductive toxicity, carcinogenicity, target organ toxicity (single exposure or repeated exposure), aspiration toxicity and other effects based on human experience and/or experimental data.

IARC Classification: The following ingredients are cited on the lists below: **None.**

--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

Not expected to be harmful to aquatic organisms and also not expected to demonstrate chronic toxicity to aquatic organisms. May cause long term adverse effects in the aquatic environment.

ENVIRONMENTAL FATE

Air: Material is highly volatile and will partition rapidly to air.

Soil: Adsorbs to soil and has low mobility

Water: Not expected to partition to sediments and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation: Expected to be readily biodegradable.

Bioaccumulation: Not expected to significantly bioaccumulate.

Hydrolysis: Transformation due to hydrolysis not expected to be significant.



Photolysis: Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation: Expected to degrade rapidly in air

OTHER ECOLOGICAL INFORMATION: VOC-YES

The above information given is based on data available for the material, the components of the material, and similar materials.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL RECOMMENDATIONS

Product disposal: Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. However, product is not suitable for disposal by either landfill or via local sewers, drains, natural streams or rivers. The following advice only applies to the product as supplied. Processing, use or contamination of this product may change the waste management options.

Waste disposal: Material cannot be saved for recovery or treating, it should be managed in an appropriate and approved waste disposal facility. Care should in any case be taken to ensure disposal is compliant with statutory or regulatory requirements and local environmental laws.

Empty Container disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not pressure cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Send to drum handlers that clean, recondition or metal reclaimer. Disposal of container and unused contents must be in accordance to local regulatory requirements and environmental laws.

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

SECTION 14 TRANSPORT INFORMATION

HAZARD CLASS

3 (Flammable Liquid) Packing Group II (Flash Point = -15 °C)

LAND: Not Regulated for Land Transport

SEA (MARPOL 73/78 Convention - Annex II)

Not Regulated for Sea Transport according to IMDG-Code (Marine Pollutant: No)

Proper shipping name:: Hydrocarbons Liquid/ NOXIOUS LIQUID/(BPCL D80, contains iso-and cycloalkanes (C12+)) Ship type: 3 Pollution category: Y

AIR (IATA): Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Hazardous Substance Act BE2535: Not Regulated

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TCSI, TSCA

This material is considered hazardous according to the classification criteria of the Hazard Classification and Communication System for Hazardous Materials BE 2555.

SECTION 16 OTHER INFORMATION

Compiled by: Bharat Petroleum Corporation Limited,
Corporate R&D Centre, Plot - 2A, Udyog Kendra, Surajpur Industrial area, Greater Noida - 201306 (U.P.)
Contact No. +91 120 – 235 4186

Disclaimer: This data sheet and the Health, Safety and environmental information is considered to be accurate as on the date specified. We have reviewed any information contained herein, which we received from sources outside BPCL. However, no warranty or representation, express or implied is made as to the accuracy or completeness of the data and information contained in this data sheet. Health & Safety precautions and environment advice noted in this data sheet may not be accurate for all



individual 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, recommendation or authorization given to practice any patent invention without a valid license. BPCL shall not be responsible for any damage or injury resulting from abnormal use of material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.

MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT DETAILS

Product Name: BPCL D40

Product Description: Distillates (Petroleum), Hydrotreated Dearomatised Light Hydrocarbon Naphtha (Petroleum), Hydrotreated Heavy/ Dearomatic Hydrocarbons

Recommended Use: Solvent, Metal working fluid, Cleaning fluid, Diluent, Viscosity modifier

COMPANY IDENTIFICATION

Supplier: Bharat Petroleum Corporation Limited

Mumbai Refinery, Mahul, Chembur, Mumbai 400074

Supplier General Contact: +91 22-25533888 / 25533999 / 25524888 / 25524999

24 Hour Environmental / Health Emergency Telephone: +91 22-2271 3000/2271-4000

SECTION 2

HAZARDS IDENTIFICATION

The subjected material is hazardous according to regulatory guidelines (Refer SDS Section 15).

CLASSIFICATION:

Flammable liquid: Category 3.

Skin irritation: Category 3.

Specific target organ toxicant (central nervous system): Category 3.

Aspiration toxicant: Category 1.

LABEL ELEMENTS

Pictograms:



Signal Word: Danger

Hazard Statements:

H226: Flammable liquid and vapor.

H304: May be fatal if swallowed and enters airways.

H316: Causes mild skin irritation.

H336: May cause drowsiness or dizziness.

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces.-- No smoking. P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical, ventilating, and lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing mist / vapors.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves and eye / face protection

P301 + P310: IF SWALLOWED: Immediately call a HOSPITAL/ doctor/physician.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing.



Rinse skin with water/shower
 P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312: Call a HOSPITAL/ doctor/physician, if you feel unwell.
 P331: Do NOT induce vomiting.
 P332 + P313: If skin irritation occurs: Get medical advice/attention.
 P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish.
 P403 + P235: Store in a well-ventilated place. Keep cool.
 P405: Store locked up.
 P501: Dispose of contents and container in accordance with local regulations.

Contains: MIXTURE OF HYDROCARBONS, DISTILLATES (PETROLEUM), HYDROTREATED DEAROMATISED LIGHT HYDROCARBON NAPHTHA (PETROLEUM), HYDROTREATED HEAVY

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

The subjected material can accumulate static charges which may cause an ignition. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Combustible.

HEALTH HAZARDS

May be irritating to the eyes, nose, throat, and lungs. Inhalation can cause dizziness, headache and nausea, depresses central nervous system and has an anesthetic. Continued inhalation can produce visual and auditory hallucinations. Human systemic effects by ingestion, somnolence, hallucinations & distortion perceptions, coughing, nausea or vomiting & fever. Aspiration of vomiting can cause serious pneumonitis particularly in young children. Skin irritant. Prolonged contact can result in skin drying and dermatitis.

ENVIRONMENTAL HAZARDS

No significant hazards.

NOTE: Supplementary use of the material without expert concurrence should not allowed for any other purpose than the intended use as mentioned in Section 1. Health studies have shown that chemical exposure may cause potential human health risks as described in Health Hazard section which may also vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

The subjected material is defined as a complex mixture/substance.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
DISTILLATES (PETROLEUM), HYDROTREATED DEAROMATISED LIGHT HYDROCARBON NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	100 %	H226, H304, H336, H316

* All concentrations are depicted in percent by weight and Gas concentrations are in percent by volume. Concentration values may vary.

SECTION 4 FIRST AID MEASURES

INHALATION

Move to fresh air from exposed area. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance.

SKIN CONTACT

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated



clothing and shoes. If persistent irritation occurs, obtain medical attention. Wash clothing before reuse.

EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. If persistent irritation occurs, obtain medical attention

INGESTION

Obtain medical attention immediately. Do not induce vomiting unless directed to do so by a medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Dry chemical, alcohol-resistant foam or carbon dioxide. Water spray may only be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Inappropriate Extinguishing Media: Direct water streams

FIRE FIGHTING

Fire Fighting Instructions: Small fires can be extinguished by hand held extinguishers. Major fires may require withdrawal and allowing the tank to burn. Fire fighters should use personal protective equipments (PPEs) and in enclosed wear self-contained breathing apparatus (SCBA) while fighting fire. Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: FLAMMABLE.

Hazardous Combustion Products: Incomplete combustion products, Oxides of carbon, Smoke, Fume

FLAMMABILITY PROPERTIES

Flash Point [Method: ASTM D-93] : 40°C-48°C (104°F-118.4)

Flammable Limits (Approximate volume in air): LEL: 0.7% UEL: 5.6%

Autoignition Temperature (Approximate): 240°C (464°F)

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In case of a spill or accidental release, shut off leaks without risk. Absorb on sand or earth. Prevent spillage from entering drains or water sources. Also, notify appropriate authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with skin and eyes. Ventilate area of leak or spill thoroughly. Do not breathe vapor. Remove all heat or ignition sources. Evacuate the area of all non-essential personnel. Shut off leaks, if possible without personal risk. To protect personnel, Personal protective equipment (PPE) is advised. Refer the Hazard Identification Section for Significant Hazards. Also refer Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Small Spill: Remove all ignition sources (no smoking, flares, sparks or flames in immediate area) and ventilate area. Evacuate all non-essential personnel. Stop leak if without risk. Dilute with water and mop up or absorb with an inert dry material and place in a sealable container. Label and seal waste containers for product recovery or appropriate disposal

Large Spill: For large liquid spills (say more than a drum), remove all ignition sources. Evacuate all non-essential personnel. Stop leak if possible and without risk. Do not flush away residues with water. Blanket spill with alcohol resistant foam to limit evaporation or dike area to contain spill and absorb with earth, sand or other non-combustible material. Transfer to a labeled, sealable container for product recovery or proper disposal. Wear appropriate protective clothing to minimize contact with skin. Allow residues to evaporate or soak up with a suitable absorbent material and dispose safely and appropriately



Water Spill: Leakage needs to be stopped, by performing this operation without risk. Also, removal from surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

The above mentioned recommendations for water/land spill are purely based on likely spill scenario for the subjected material; however, local geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. Thus, local experts should be consulted.

ENVIRONMENTAL PRECAUTIONS

Contain and recover liquid when possible with an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand or earth) and place in a chemical waste container. Do not use combustible materials such as saw dust. Use non-sparking tools and equipment. Prevent from spreading or entering into drains, ditches, rivers and other waterways by using sand, earth or other appropriate barriers.

SECTION 7 HANDLING AND STORAGE

HANDLING

Do not use/store near heat/open flame. Avoid contact with liquid or vapors. Avoid contact with skin and eye. Use gumboots, gloves while handling the product. Do not inhale. Stay upwind while handling the product. It should never be used to remove oil or grease from skin. It should not be siphoned by mouth. It should be stored in closed containers away from heat & source of ignition. Wash thoroughly after handling

Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance.

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

Loading/Unloading Temperature: [Ambient/Room Temperature]

Transport Temperature: [Ambient/Room Temperature]

Transport Pressure: [Ambient/Room Temperature]

STORAGE

Do not use /store near heat/open flame/water/acids. The type of container used to store the material may affect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

Storage Temperature: [Ambient/Room Temperature]

Storage Pressure: [at Ambient/Room Temperature]

Suitable Containers/Packing: Drums; Tank Cars; Tank Trucks; Barges

Suitable Materials and Coatings (Chemical Compatibility): Teflon; Polyethylene; Polypropylene
Carbon Steel; Stainless Steel

Unsuitable Materials and Coatings: Butyl Rubber; Polystyrene; Ethylene-propylene-diene monomer (EPDM); Natural Rubber



SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES
Exposure limits/standards

Substance Name	Form	Limit/Standard			Note	Source
DISTILLATES (PETROLEUM), HYDROTREATED DEAROMATISED LIGHT HYDROCARBON NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	Vapor	RCP - TWA	1200 mg/m 3	LD50 (Oral Rat), 197ppm	Petroleum Hydrocarbon s	Bharat Petroleum Corporation Limited

NOTE: Limits/standards are shown for reference only and user has to follow applicable appropriate regulations.

ENGINEERING CONTROLS

An appropriate system for exhaust or adequate ventilation is recommended to keep employee exposures above the Exposure Limits. Typically, local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source. It is also recommended to use explosion-proof ventilation equipment.

PERSONAL PROTECTION

PPEs selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: Where local exhaust ventilation is not practicable, wear a full face-piece or a double cartridge respirator with organic vapor canister NPF 400. It may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, and whichever is the lowest. For emergencies or instances where the exposure levels are not known, use a full-face-piece positive-pressure, air-supplied respirator.

WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Hand Protection: PVC gloves, chemical resistant gloves, nitrile gloves are recommended based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions.

Eye Protection: Use chemical safety goggles with side shields or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin and Body Protection: Wear impervious protective clothing such as one-piece overall, including safety shoes or boots, gloves, laboratory coat, apron or any appropriate cotton-made clothing to prevent skin contact. Any specific clothing information provided is based on published literature or manufacturer data.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, smoking and/or any activity. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Always maintain and practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with most appropriate and applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.



SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

Physical State: Liquid
Appearance: Water white liquid. Characteristic Hydrocarbon like odour.
Odour: Mild Petroleum Solvent
Odour Threshold: N/D
Water Solubility: Insoluble

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Specific Gravity : 0.7700-0.800
Sulphur: < 5 ppm
Aromatic Content: Max 0.03 wt.%
Flammability (Solid, Gas): N/A
Flash Point [Method]: 40°C-48°C (104°F-118.4) [ASTM D-93]
Autoignition Temperature: 255°C (464°F)
Boiling Point / Range: 150°C (293°F) - 245°C (428°F)
Decomposition Temperature: N/D
Vapour Density (Air = 1): ~ 4.9 at 101 kPa
Vapour Pressure: < 0.15 kPa at 20 °C
Viscosity: 1.4- 1.7 cSt at 40°C
Freezing Point : N/D
Pour Point: <-50°C (-58°F)
Melting Point: N/D
Molecular weight: 144 (approximate)
Hygroscopic: No
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/D

NOTE: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications.

SECTION 10 STABILITY AND REACTIVITY

STABILITY

Chemically stable under normal temperature and pressure for use and storage.

CHEMICAL INCOMPATIBILITIES/MATERIALS TO AVOID

Incompatible with oxidizing agents such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc. It reacts vigorously and may presents a serious explosion hazard 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

Thermal decomposition is highly dependent on conditions. A complex mixture of solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal and oxidative degradation. However, material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS

No hazardous polymerization.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Inhalation: Minimally toxic through inhalation and negligible hazard at ambient/normal handling temperatures.



Ingestion Toxicity: LD50 >5,000 mg/kg (Minimally Toxic. Based on test data for structurally similar materials.)

Skin Toxicity: LD50 >3,160 mg/kg (Minimally Toxic. Based on test data for structurally similar materials.)

Eye irritation: May cause mild, short-lasting discomfort to eyes.

Skin irritation: Moderately irritating to skin with prolonged exposure.

Respiratory toxicity: Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Human effects: Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

For the product itself: Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anaesthesia, drowsiness, unconsciousness and other central nervous system effects including death. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

OTHER HEALTH EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Anticipated health effects from sub-chronic, chronic, respiratory or skin sensitization, mutagenicity, reproductive toxicity, carcinogenicity, target organ toxicity (single exposure or repeated exposure), aspiration toxicity and other effects based on human experience and/or experimental data.

IARC Classification: The following ingredients are cited on the lists below: **None.**

--REGULATORY LISTS SEARCHED--
1 = NTP CARC 3 = IARC 1 5 = IARC 2B
2 = NTP SUS 4 = IARC 2A 6 = OSHA CARC

SECTION 12

ECOLOGICAL INFORMATION

ECOTOXICITY

Not expected to be harmful to aquatic organisms and also not expected to demonstrate chronic toxicity to aquatic organisms. May cause long term adverse effects in the aquatic environment.

ENVIRONMENTAL FATE

Air: Material is highly volatile and will partition rapidly to air.

Soil: Adsorbs to soil and has low mobility

Water: Not expected to partition to sediments and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation: Expected to be readily biodegradable.

Bioaccumulation: Not expected to significantly bioaccumulate.

Hydrolysis: Transformation due to hydrolysis not expected to be significant.

Photolysis: Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation: Expected to degrade rapidly in air

OTHER ECOLOGICAL INFORMATION: VOC-YES

The above information given is based on data available for the material, the components of the material, and similar materials.

SECTION 13

DISPOSAL CONSIDERATIONS

DISPOSAL RECOMMENDATIONS

Product disposal: Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. However, product is not suitable for disposal by either landfill or via local sewers, drains, natural streams or rivers. The following advice only applies to the product as supplied. Processing, use or contamination of this product may change the waste management options.

Waste disposal: Material cannot be saved for recovery or treating, it should be managed in an appropriate and approved waste disposal facility. Care should in any case be taken to ensure disposal is



compliant with statutory or regulatory requirements and local environmental laws.

Empty Container disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not pressure cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Send to drum handlers that clean, recondition or metal reclaimer. Disposal of container and unused contents must be in accordance to local regulatory requirements and environmental laws.

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

SECTION 14	TRANSPORT INFORMATION
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HAZARD CLASS

3 (Flammable Liquid) Packing Group III

LAND (DOT)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.

Hazard Class & Division: COMBUSTIBLE LIQUID

ID Number: 1268/3295

Packing Group: III

ERG Number : 128

Label(s) : NONE

Transport Document Name: UN1268/UN3295, PETROLEUM DISTILLATES, N.O.S., COMBUSTIBLE LIQUID, PG III

Footnote: The flash point of this material is greater than 100 F. Regulatory classification of this material varies. DOT: Flammable liquid or combustible liquid. OSHA: Combustible liquid. IATA/IMO: Flammable liquid. This material is not regulated under 49 CFR in a container of 119 gallon capacity or less when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

LAND (TDG)

Proper Shipping Name : PETROLEUM DISTILLATES, N.O.S.

Hazard Class & Division : 3

UN Number: 1268/3295

Packing Group: III

Footnote: In containers of 454 litres or less this material is exempt from TDG regulations.

SEA (IMDG)

Hazardous class (IMCO) NO: 3

UN Number: 1268/3295

Packing Group Code : II

EMS Number : 3-07

MFAG Number: 311

IMDG Page Number : 3141

FLAMMABLE LIQUID PG II

SUB RISK: Not applicable

AIR (IATA)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.

Hazard Class & Division: 3

UN Number: 1268/3295

Packing Group : III

Label(s) / Mark(s) : 3

Transport Document Name: UN1268 UN3295, PETROLEUM DISTILLATES, N.O.S., 3, PG III

SECTION 15	REGULATORY INFORMATION
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REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Hazardous Substance Act BE2535: Not Regulated

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECS, KECI, PICCS, TCSI, TSCA

GHS/BPCL/2021/12/R0
BPCL D40
Date: 14.12.2021



This material is considered hazardous according to the classification criteria of the Hazard Classification and Communication System for Hazardous Materials BE 2555.

SECTION 16	OTHER INFORMATION
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Compiled by: Bharat Petroleum Corporation Limited,
Corporate R&D Centre, Plot - 2A, Udyog Kendra,
Surajpur Industrial area, Greater Noida - 201306 (U.P.)
Contact No. +91 120 – 235 4186

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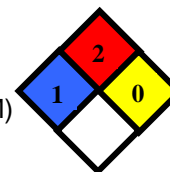
MATERIAL SAFETY DATA SHEET



De-aromatised Solvent D 80

Section 1 – Chemical Product and Company Identification

Chemical Name: De-aromatised Solvent D 80
Chemical Formula: Complex mixture of hydrocarbons
CAS Number: 64742-47-8
Synonyms: HYDROTREATED DISTILLATES (PETROLEUM)
General Use: Solvent



NFPA 704 (Sec 16)

Manufacture's Name : Bharat Petroleum Corporation Limited
Address : Refinery, Mahul, Chembur, Mumbai 400074
Telephone Number for Info : 25533888 / 25533999 / 25524888 / 25524999
MSDS No. :
Date Prepared : June 2020
Revision # : 0

Section 2 – Composition / Information on Ingredients

Composition : Mixture of hydrocarbons
Hazardous Components : DISTILLATES (PETROLEUM), HYDROTREATED LIGHT

Section 3 – Hazards Identification

Primary Entry Routes: Ingestion, inhalation, skin and eyes
Acute Effects: Inhalation can cause dizziness, headache and nausea, depresses central nervous system and has an anesthetic effect. Continued inhalation can produce visual and auditory hallucinations. Human systemic effects by ingestion, somnolence, hallucinations & distortion perceptions, coughing, nausea or vomiting & fever. Aspiration of vomiting can cause serious pneumonitis particularly in young children. Skin irritant. Prolonged contact can result in skin drying and dermatitis. Eye irritant.
Carcinogenicity : Not listed as carcinogenic
Chronic Effects : No data available

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 : Paraffin olive oil or some other vegetable oil may be given orally to retard absorption of dearomatic D 80 solvent. Gastric dosage and induction of vomiting not advisable because of the possibility of the development of chemical pneumonia from aspiration of dearomatic solvent D 80. Get medical help at once.

Section 5 – Fire Fighting Measures

Flash Point :	> 70 °C
Flash Point Method :	ASTM D-92
Auto ignition Temperature:	~250°C (approximate)
LEL :	0.6 %
UEL :	5 %
Flammability Classification :	Flammable
Extinguishing Media :	Foam, Dry Chemical Powder, CO2
Unusual Fire or Explosion :	Heat produces vapours and can cause violent rupture of containers
Hazards :	Carbon di oxide, carbon mono oxide
Hazardous Combustion	
Products :	
Fire-Fighting Instructions :	Small fires can be extinguished by hand held extinguishers. Major fires may require withdrawal and allowing the tank to burn. Fire fighters should wear self breathing apparatus while fighting fire

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
Cleanup :	After spills wash area with soap and water preventing runoff from entering drains.

Section 7 – Handling and Storage

Handling Precautions :	Do not use/store near heat/open flame. Avoid contact with liquid or vapours. Use gumboots, gloves while handling the product. Do not inhale. Stay upwind while handling the product. Dearomatic solvent D 80 should never be used to remove oil or grease from skin. It should not be siphoned by mouth It should be stored in closed containers away from heat & source of ignition. 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
Respiratory Protection :	Use respiratory protection if ventilation is improper
Protective Clothing /	Use face shield, PVC gloves, safety boots while handling.
Equipment :	Contaminated clothing to be immediately removed

Section 9 – Protection Physical and Chemical Properties

Physical State :	Liquid
Appearance and Odor :	Water white liquid. Characteristic Hydrocarbon like odour.
Vapor Pressure :	<0.01 kpa at 20 °C
Specific Gravity :	> 0.7800
Sulphur:	< 5 ppm
Aromatic Content:	< 400 ppm

Water Solubility :	Insoluble
Boiling Point :	196 °C to 260 °C
Pour Point :	< - 30 °C
Vapour Density :	~6.2 (Air = 1)

Section 10 – Stability and Reactivity

Stability :	Chemically stable.
Chemical Incompatibilities :	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

ACIGH TLV TWA :	1200 mg / m3	LD50 (Oral-Rat) 165 ppm
Acute Inhalation Effects:	No data available	

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 CO₂ and CO.

Section 13 – Disposal Considerations

Seal all the waste in vapour tight plastic bags for eventual disposal or incineration.

Section 14 – Transport Information

Shipping Name :De aromatic solvent D 80, HYDROTREATED DISTILLATES (PETROLEUM)

Section 15 – Regulatory Information

Non - Toxic/Flammable Substance

Section 16 – Other Information

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Corporate R&D Centre, Plot - 2A, Udyog Kendra, Surajpur Industrial area, Greater Noida - 201306 (U.P.)
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