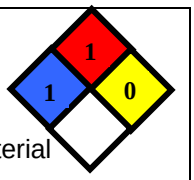
MATERIAL SAFETY DATA SHEET

BITUMEN

Section 1 – Chemical Product and Company Identification

Chemical Name:	Bitumen
Chemical Formula:	Complex mixture of heavy hydrocarbons
CAS Number:	
Synonyms:	Tar, Asphalt
General Use:	Road building, tarmac building, water proofing material
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:	2



NFPA 704 (Sec 16)

Section 2 – Composition / Information on Ingredients

Composition:	Mixture of heavy hydrocarbons
Hazardous Components:	Hydrogen Sulphide
ACGIH TLV:	10 ppm

Section 3 – Hazards Identification

Primary Entry Routes:	Inhalation, skin and eyes
Acute Effects:	Bitumen vapours can irritate eyes. Inhalation of vapours can cause dizziness. As the product is mostly handled in hot conditions (>100 °C) skin burns are the most likely health hazard. Product vapours may contain H2S and hence casualties due to its exposure should be removed immediately to fresh air and medical attention sought.
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:	In case of accidental contact with skin, treat for burns. In case of circumferential burn with adhesion of the bitumen, the adhering bitumen should be split to prevent tourniquet effect.
Inhalation:	Product vapours may contain H2S and hence casualties due to its exposure should be removed immediately to fresh air Consult a physician if irritation persists.

Section 5 – Fire Fighting Measures

Flash Point:	> 175 °C
Flash Point Method:	Clevland Open Cup

Auto ignition Temperature:	220 to 275 °C
LEL:	Data not available
UEL:	Data not available
Flammability Classification:	Flammable
Extinguishing Media:	Foam, Dry Chemical Powder, CO2
Unusual Fire or Explosion Hazards:	Heat produces corrosive vapours and H2S
Hazardous Combustion Products:	Carbon di oxide, carbon mono oxide, H2S
Fire-Fighting Instructions:	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 breathing harmful vapors. As the product is mostly handled in hot conditions (>100 °C) skin burns are the most likely health hazard. 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 / Equipment:	Use face shield, PVC gloves, safety boots while handling. Contaminated clothing to be immediately removed

Section 9 – Protection Physical and Chemical Properties

Physical State:	Semi solid in hot condition
Appearance and Odor:	Dark brown to black solid with tarry like odour
Vapor Pressure:	Not pertinent
Specific Gravity:	0.97 to 1.2 gm / cc
Water Solubility:	Insoluble
Boiling Point:	Not pertinent
Freezing Point:	Not pertinent
Vapour density:	Heavier than air (Air = 1)

Section 10 – Stability and Reactivity

Stability:	Chemically stable.
Chemical Incompatibilities:	Incompatible with oxidizing agents & chlorine.
Conditions to Avoid:	Does not react with common materials but may react with oxidising agents.
Hazardous Decomposition Products:	Carbon dioxide, carbon monoxide, H2S

Section 11 – Toxicological Information

Toxicity Data:	No data available
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

Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations

Section 14 – Transport Information

Shipping Name:	Bitumen

Section 15 – Regulatory Information

Non - Toxic/Flammable Substance

Section 16 – Other Information

No attempt should be made to remove firmly adhering bitumen from the skin. Once the bitumen has cooled, it will do no further harm and infact provides a sterile covering over a burnt area. As healing takes place, the bitumen plaque will detach itself, usually after a few days. When it is necessary to remove adhering bitumen from the skin, because of the site of contact or the nature of the material, liberal amounts of warm medicinal paraffin can be used. Alternatively, a blend of medicinal paraffin and kerosene may be employed with care, as kerosene may cause skin irritation. If solvent treatment is used, it should be followed by washing with soap and water, then the appropriate refatting agent or skin cleaning cream. Only medically approved solvents may be used to remove bitumen from burns as other solvents could cause further skin damage.

Prepared by : Process Safety Section, BPCL-Mumbai Refinery

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