



Visakh Refinery

MATERIAL SAFETY DATA SHEET

Bitumen

1. Chemical identity

<i>Chemical name:</i> BITUMEN		<i>Chemical classification:</i> Mixture of Hydrocarbons
<i>Synonyms:</i> Mineral Pitch, Asphalt.		<i>Trade name:</i> VG-10, VG-30, VG-40
<i>Formula :</i> Mixture of Hydrocarbons	<i>C.A.S. NO.</i> 8052-42-4	<i>U.N.NO.</i> 3257
<i>Regulated identification</i> UN Number 3257 <i>Codes/Label:</i> .	<i>Shipping name:</i> <i>Hazchem code class:</i> 2(W) <i>Hazardous waste :</i> N.A.	
<i>Hazardous ingredients:</i> Complex mixture of heavy hydrocarbons	<i>C.A.S.NO.</i> 8052-42-4	<i>Hazardous ingredients C.A.S.NO.-</i>

2. Physical and chemical data

<i>Boiling point/Range (deg.C) :</i> >498. <i>Physical state:</i> Semi solid Solid with tarry like odor	<i>Appearance:</i> Dark brown-Black
<i>Melting point (deg.C) :</i> N.A. <i>Vapour pressure:</i> - N.A..	<i>Odour:</i> Strong tarry
<i>Vapour density:</i> N.A..	
<i>Solubility in water @ 30 deg.C:</i> Insoluble	
<i>Specific gravity:</i> 1.04-1.05 at 15 deg C	
<i>Others:</i> P ^H : N.A	

3. Fire and explosion Hazard data

<i>Flammability:</i> Flammable	<i>LEL:</i> --	<i>Flash point (deg C):</i> > 220 (OC)
<i>TDG Flammability:</i>	<i>UEL:</i> --	
<i>Auto Ignition Temp:</i> 280 deg. C		
<i>Explosion sensitivity to impact:</i> Stable		
<i>Explosion sensitivity to static electricity:</i> No.		
<i>Hazardous Combustion Products:</i> CO (Carbon Monoxide), CO ₂ (Carbon Dioxide) & H ₂ S		
<i>Hazardous Polymerization:</i> N.A.		

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<i>Combustible liquid:</i> Yes	<i>Explosive material:</i> No	<i>Corrosive material:</i> No
<i>Flammable material :</i> Yes	<i>Oxidizer:</i> No.	
<i>Pyrophoric material:</i> No	<i>Organic peroxide:</i> No	

4. Reactivity data

<i>Chemical stability:</i> Stable
<i>Incompatibility with other material:</i> Oxidizing agents, alkali metals, hydrogen, chlorine,
<i>Hazardous reaction products:</i> Burning Bitumen liberates large volumes of Carbon Monoxide, Carbon dioxide & Sulphur dioxide which will be extremely irritating to eyes and breathing passages. Hydrogen Sulphide gas may be released under certain storage conditions
<i>Hazardous Decomposition products:</i> Carbon dioxide, carbon monoxide, Hydrogen Sulphide

5. Health Hazard data

<i>Routes of entry:</i> Inhalation, Skin, Mucous Membranes, Eye Contact and Ingestion				
<i>Effects of Exposure / symptoms:</i> A Moderate Irritant. Contact with Skin and eye cause irritation.				
<i>Emergency treatment:</i> In case of eye or Skin contact, flush with plenty of water. Move the victim to fresh air, obtain medical assistance				
<i>L.D₅₀ (Oral-Rat):</i> - > 5000 mg/kg,	<i>L.C₅₀: (Rat 4hrs)</i> > 94.4 mg/m ³			
<i>Permissible Exposure limit:</i> N.A	<i>Odour threshold:</i> N.A.			
<i>TLV (ACGIH):</i> 5 ppm*	<i>STEL:</i> --			
<i>NFPA Hazard Signals</i>	<i>Health</i>	<i>Flammability</i>	<i>Reactivity/Stability</i>	<i>Special</i>
	2	1	0	-

6. Preventive measures

<i>Personal Protective equipment:</i> Face shield when needed. Wear tight-fitting, chemical splash goggles. Thick, thermally insulated protective gloves. Change protective gloves regularly. Protective gloves according to standards. all protective equipment worn should be suitable for use with high temperatures.
<i>Handling and storage precautions:</i> Store In Cool, Dry Ventilated Separate Area Away From any Source Of Ignition. Avoid breathing harmful vapors.

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7. Emergency and first aid measures

Fire:
<i>Fire extinguishing media:</i> Water spray, Dry Chemical Powder (DCP), Carbon Dioxide. <i>Special procedure:</i> Use Self Contained Breathing Apparatus Set While Fire Fighting. Eliminate all sources of ignition. Use Water Spray To Cool The Fire Exposed Container. <i>Unusual hazards:</i> Boil-over of tanks and violent eruptions in the presence of water (splatter of hot material). Respiratory problems or nausea by excessive exposure to hot bitumen fumes. Burning bitumen gives rise to a complex mixture of gases and airborne particles including Carbon Monoxide and Sulphur oxides.
Exposure:
Remove Victim to Fresh Air, Contacted Body Part Immediately Plunge Under Cold Running Water for Ten Minutes. Obtain Medical Advice Without Delay.
Spills:
Steps to be taken: Prevent spillage from entering drains or water sources Cleanup: After spills wash area with water preventing runoff from entering drains Waste Disposal method: Smaller Quantity Can Be Incinerated. Shut off leaks without risk. Absorb on sand or earth.

8 . Additional Information /reference

In case of leak, restrict ignition sources and cool down the spill with water spray.
Do not approach leaking / affected area without proper Personal protection.
Ensure Storage at ventilated and specified area away from heat & source of ignition
Wash contacted body part with plenty of water.
Do not allow vehicles and unauthorized personnel

9 . Manufacture/Suppliers Data

Firm's Name: Hindustan Petroleum Corporation Ltd. Visakh Refinery	Emergency Telephone During Transit :(0891) 2894444, 2894445
Mailing Address: Malkapuram, Visakhapatnam-530011	
Telephone Number:(0891)-289-5000	
Contact Persons In Case of Emergency:	
Head (Operations) TEL: :(0891)2894400	
Head-Fire & Safety TEL: :(0891)2894843	
Fire & Safety Control Room TEL: :(0891) 2894848, 2894849	

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