

## MATERIAL SAFETY DATA SHEET PERFORMANCE GRADE BITUMEN

### 1. Identification of Substance and Supplier Substance/Preparation:

Bitumen supplier: [www.bituphalt.com](http://www.bituphalt.com)

E-mail: [info@bituphalt.com](mailto:info@bituphalt.com)

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## HAZARD INFORMATION

### 2. Composition/Information on Ingredients

The product contains no dangerous substances per EC Directive 67/548/EEC and further modifications and adaptations pointed out in this publication.

### 3. Hazardous Identification

Contact with product at elevated temperatures can result in thermal burns. Inhalation of vapour or mist can cause headache, nausea, irritation of nose and lungs and fatigue the sense of smell. Eye contact with material can cause slight irritation. Prolonged or repeated skin contact can cause slight skin irritation or allergic skin reaction.

## EMERGENCY ACTION

### 4. First Aid Measures

Eye Contact: If the substance has entered the eyes, then irrigate with emergency eye wash solution (if available) or clean water for up to 15 minutes. Seek medical attention.

Skin Contact: Remove contamination with proprietary skin cleaner, followed by washing with soap and water. If irritation persists, seek medical attention.

Ingestion: If swallowed seek medical advice immediately. Do not induce vomiting.

Inhalation: If inhalation occurs, remove the patient into fresh air. Keep warm and at rest.

### 5. Firefighting Measures

The product is non-combustible, but will ignite and burn at temperatures exceeding the flash point. If there is a fire, it can cause dangerous fumes. If necessary, wear a breathing apparatus. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

### 6. Accidental Release Measures

Avoid skin contact, wear suitable protective equipment (see 8).

Cleaning up: Extinguish sources of heat and fire. Cover leaks with absorbent material such as sand. Allow it to cool until hardened. Pick up as solid waste. Recover and return free product to proper containers.

## PRECAUTIONS

### 7. Storage & Handling

Storage: Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area.

Handling: Avoid contact with skin, eyes and clothing. Avoid breathing fumes, gas, or vapors, use only with adequate ventilation. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment.

### 8. Exposure Controls/Personal Protection

Personal protective equipment:

a. Respiratory protection: Use breathing apparatus in case of inhaling vapours for a long time.

b. Hand & skin protection: Avoid skin contact by wearing protective clothing, for example waterproof gloves, overalls, and boots. Change heavily contaminated clothing as soon as possible and launder before reuse.

c. Eye protection: Wear waterproof protective glasses.

## PRODUCT INFORMATION

### 9. Physical & Chemical Properties

Form: Solid or Semi-Solid at room temperature

Colour: Black-Brown

Odour: Characteristic

Specific Gravity: 1.00

Solubility in Water: Dilutable

Alkalinity – PH: N/A

Boiling Point/Boiling Range: >230°C

Melting Point/Melting Range: >100°C

Flash Point: N/A

Flammability & Auto Flammability: N/A

Oxidising Properties: N/A

Vapour Pressure: N/A

### 10. Stability & Reactivity

The product is stable in normal usage & storage conditions at environmental temperatures. Thermal decomposition or burning may release oxides of carbon and other toxic gases or vapours.

### 11. Toxicological Information

See 10.

### **12. Ecological Information**

There are no known eco-toxic effects in the existing patterns of productions, handling, storage, and use.

### **13. Disposal Considerations**

Coagulate the dispersion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemical sewer. Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

## **ADDITIONAL INFORMATION**

### **14. Transport Information**

- Not hazardous,
- Classification for conveyance – not required,
- Good are None DG as per IATA regulations.

## **BITUPHALT BITUMEN**

## PG64-22 PERFORMANCE GRADE BITUMEN SPECIFICATIONS

Property	PG64	Test Method
	22	
Average 7-day maximum pavement design temperature, °C	64	
Minimum pavement design temperature, °C	>-22	
<b>Original Binder</b>		
Flash point temperature minimum, °C	230	AASHTO T48
Viscosity maximum 3 Pa.s, Test Temperature, °C	135	AASHTO T316
Dynamic Shear $G^*/\sin$ minimum 2.2 KPa Test Temperature, °C	64	AASHTO T315
<b>Rolling Thin Film Oven Test</b>		AASHTO T240
Mass change maximum percent	1.00	
Dynamic Shear $G^*/\sin$ minimum 2.2 KPa Test Temperature, @ 10 rad/s °C	64	AASHTO T315
<b>Pressure Aging Vessel</b>		AASHTO R28
PAV aging temperature, °C	100	
Dynamic Shear $G^*/\sin$ maximum 5000 KPa Test Temperature, @ 10 rad/s °C	25	AASHTO T315
Creep Stiffness S maximum 300 Mpa m-value minimum 0.300 Test Temperature, @ 60s °C	-12	AASHTO T313
Direct tension failure strain minimum 1 % Test Temperature @ 1mm/min, °C	-12	AASHTO T314
Critical low cracking temperature critical cracking determined by PP42 Test Temperature	-12	AASHTO PP42