BERNET PARS BITUMEN

e-Catalogue

MSDS

1. SUBSTANCE – PREPARATION – COMPANY IDENTIFICATION

Product name:	Bitumen
Product type:	PMB 25/55-75

2. COMPOSITION AND INFORMATION ON INGREDIENTS

Information on ingredients:	Penetration grade bitumen is not classified as hazardous substance. The process of dispersion of the bitumen into water does not alter the classification.

3. HAZARDS IDENTIFICATION

Health hazard:	Skin contact with molten product can cause burns. The product can release Hydrogen Sulfide – H2S – gas that can be harmful or fatal if inhaled. The gas may accumulate in confined spaces. At high concentration, H2S gas is odorless. As such, it should not be relied on odor to detect presence of gas. Prolonged exposure to vapors, above the recommended occupational exposure standard may cause irritation to the skin, the eyes and the respiratory tract.
Environmental hazard:	Asphalt is not classified as dangerous substance. Waste pollutant on short term. Not dispersible in water.
Safety hazard:	Low hazard - High flash point product.

4. FIRST AID MEASURES

Symptoms and effects:	Skin burns. Prolonged contact causes irritation that may cause dermatitis. Prolonged exposure to high concentration vapors causes irritation the respiratory system.
First aid - Inhalation:	Remove to fresh air. If breathing has stopped, apply artificial respiration. If breathing but unconscious, place in a recovery position.If heartbeat is absent, give external cardiac compression. If any of the above symptoms persist, seek immediate medical assistance.
First aid – Eye:	Rinse eye immediately with plenty of cold water for at least 10 minutes without rubbing eye. Seek medical assistance in case of persistent irritation.
First aid – Skin:	Immediately immerse or flush the affected areas with plenty of cold water until all asphalt is thoroughly cooled. Do not attempt to remove material or contaminated clothing as this may induce more damage to the burnt skin. Cover with clear cotton sheeting or gauze and get immediate medical attention. For small hot bitumen stains, immediately flush with plenty of cold water, remove contaminated clothing and gently remove by using medicinally approved white oil. Contaminated cloths must be removed and laundered before re-use.
First aid – Ingestion:	Wash out with plenty of cold water. Do not induce vomiting. Protect the airway if vomiting begins Seek medical assistance if recovery does not rapidly occur. If medical assistance cannotbe obtained, take the patient and product sample to the nearest hospital.
Advice to physicians:	Treat symptomatically Light bitumen stains will better be removed using medicinal paraffin white oil by gentle swabbing. In case of burns, the cold bitumen will provide a sterile layer that will detach by itself aftera few days

5. FIRE FIGHTING MEASURES

Ignition potential:	Flash point is higher than 225degC and ignition temperature is above 400 degC.
Hazard:	Combustion is likely to give rise to potentially dangerous complex mixture of gases and airborne particles, including carbon monoxide, sulfur dioxide, organic and inorganic compounds.
Extinguishing media:	Sand or earth for small fires. Water spray, dry powder, carbon dioxide for larger fires
Protective equipment:	Breathe apparatus and eye protections are required for fire fighting personnel, especially for fires in confined spaces

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Wear protective clothing including gloves, goggles, long sleeve jacket and appropriate footwear.
Small spill:	Cover with sand or earth to prevent from spreading. When product has cooled down and solidified, shovel into an appropriate container for disposal in accordance with local regulations
Large spill:	Build barriers or make trenches with any containing material such as sand, earth, cement powder to prevent product from spreading into drains, ditches, rivers. Allow the product to solidify before disposal in accordance with local regulations
Environmental precautions:	Prevent from spilling into water streams of all size by methods above.

7. HANDLING AND STORAGE

Handling:	Avoid contact with skin, eyes and clothing. Avoid breathing of vapors Do not eat, drink or smoke when handling product Protective equipment comprising should be worn, especially suitable footwear and gloves.
Handling temperature:	Usually in the range 130 to 170 degrees C.
Transport and storage:	Store bitumen in dedicated tanks, preferably equipped with a circulating line/pump system. Do not mix bitumen with other bitumen products such as pure bitumen, cutback bitumenor bitumen emulsions grade. Keep drums in a cool and well-ventilated place. Prevent from water ingress by proper storage of drums

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Occupational exposure measures:	The Threshold Limit Values - TLV - as per American Conference on Industrial Hygienist - ACGIH - for bitumen fumes is 5 mg/m3 for a daily 8 hours exposure. The TLV as per ACGIH for H2S is 14 mg/m3 for a daily 8 hours exposure
Engineering control measures:	Apply bitumen in well-ventilated areas.
Personal protection:	Respiratory – Not normally required or fresh air face mask. Eyes – Safety glasses with side shields. Wear face only where contact is likely such asduring loading and unloading operations Body – Overall made of 100% cotton with long sleeves and close fitting at wrist and neck.Safety boots or shoes.
Hygiene measures:	Clean hands preferably using medicinal approved white oil. Wash hands before heating, drinking or smoking Launder garments and undergarments regularly Dispose off soiled cloths and gloves

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black solid at ambient temperature, liquid at temperature above 100 degC.
Odor:	Bitumen
Boiling point:	Not applicable
Density:	1.0 to 1.1 at 25 degrees C
Flash point:	Above 225degC
Flammable limit:	Above 400 degC
Explosive limit:	Potentially low
Solubility in water:	Not soluble
Solubility in solvents:	Soluble

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Compatible with other bitumen products Incompatible with bitumen emulsions
Hazardous decomposition products:	None expected under normal conditions of use

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Inhalation – Toxicological information has not been established for bitumen
	Dermal – LD50 expected to be above 2000 mg/kg.
	Oral – LD50 expected to be above 2000 mg/kg
Chronic toxicity:	No effects and data found that support the long term toxicity of asphalt
Irritation:	Inhalation – Slight irritation of respiratory tract in high concentrations
	Skin contact – Expected to be slightly irritant. Not expected to be a skin sensitiserEye
	contact – Vapors expected to be slightly irritant.
Carcinogenicity:	There is no evidence that bitumen is carcinogenic to humans.
Mutagenicity:	No history or data to support mutagenicity.

12. ECOLOGICAL INFORMATION

Environmental mobility:	Mobile only at temperature higher than 80 deg. C. Become solid as temperature recedes and therefore non mobile.
Environmental biodegradability:	Not considered as biodegradable.
Ecotoxicity:	Not soluble in water. Practically non-toxic with LC/EC50 > 100 mg/L to aquatic organisms.
Bioaccumulation:	Not expected to bio-accumulate.

13. DISPOSAL CONSIDERATIONS

Disposal methods:	Waste should not be allowed to contaminate soil or water. Waste from spillage or tank-cleaning operations should be disposed of in accordance with local regulations.
Drums disposal:	Drums should be drained before returning to the supplier or for drum conditioning, without removing marks or labels.

14. TRANSPORT INFORMATION

Could not classified as hazardous for transport (ADR, RID, UN, IATA/ICAO).

15. REGULATORY INFORMATION

Classification:	Not classified as dangerous under current EC criteria

16. OTHER INFORMATION

Use of the product:	Bitumen is primarily used in road construction and maintenance. For otherapplications, the user should seek advice from the supplier.
Source of key data:	The recommendations and information presented in this Material Safety Data Sheet were compiled from actual test data and components information from suppliers and from recognized codes of good practices.
Limits:	This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is based to the best of our current knowledge and believed accurate and reliable as of the date indicated. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use
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