



Central Pollution Control Board

Ministry of Environment & Forests, Govt of India, Parivesh Bhawan, East Arjun Nagar, Delhi - 110032

MATERIAL SAFETY DATA SHEETS

47

Asphalt

1. CHEMICAL IDENTITY

Chemical Name : Asphalt

Chemical Classification: Toxic

Trade Name :

Synonyms: Asphaltum, Petroleum asphalt, Petroleum bitumen, Road asphalt, Roofing asphalt

Formula : Mixture

CAS No: 8052-42-4

UN No: 1999

Regulated Identification

Shipping Name :

Hazchem Code :

Codes / Label : Class 3

Hazardous Waste ID No :

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
1 Asphalt	8052-42-4	3	
2		4	

2. PHYSICAL / CHEMICAL DATA

Boiling Pt. °C: 470

Physical State: Almost black, thick liq or semisolid.

Appearance: Almost black, thick liq or semisolid. Contains sulfur, nitrogen and oxygen.

Melting Pt °C: 43.3

Vapour Pressure @ 35°C mmHg: 0.018 lb/sq in @ 99 deg C

Odour: Characteristic naphthalene-like odor.

Vapour Density(Air =1):

Solubility in water at 30°C g/100ml: Insoluble

Others:

Specific Gravity (Water =1): 0.95 - 1.1 g/cm³ (20 °C)

pH :

3. FIRE / EXPLOSION HAZARD DATA

Flammability : Yes

LEL:

Flash Point °C in OC: 205+

TDG Flammability:

UEL:

Flash Point °C in CC: 204+

Autoignition Temperature °C : 485

Explosion sensitivity to impact:

Explosion sensitivity to static Electricity:

Hazardous Combustion Products : Fire will produce irritating, corrosive and/or toxic gases.

Hazardous Polymerization :

Combustible Liquid:

Explosive Material:

Corrosive Material

Flammable Material: Yes

Oxidiser :

Others:

Pyrophoric Material:

Organic Peroxide :

4. REACTIVITY DATA

Chemical Stability : Stable.

Incompatibility with other material : Incompatible with strong oxidizing agents like nitric acid.

Reactivity :

Hazardous : When heated to decomposition it emits smoke, irritating and acrid fumes.

Reaction Products

5. HEALTH HAZARD DATA

Routes of entry: Inhalation, ingestion, skin and eyes

Effects of Exposure / Symptoms:

Inhalation: Prolonged irritation of hot asphalt fumes and release of hydrogen sulfide gas can produce respiratory irritation, pulmonary edema, and hypoxia. Ingestion: Ezoars may occur if asphalt is swallowed. Nausea, vomiting and diarrhea are possible if ingested. Skin: Dermal exposure to hot asphalt produces a lesion which resembles a scald injury. The tar tends to adhere to some areas of skin, but may come off in areas where slight bullae are produced. Partial thickness burns are generally observed, but patchy areas of full thickness skin loss are common. Eye: Exposure to hot asphalt fumes can cause severe irritation of eyes and mucous membranes.

Emergency Treatment :

Inhalation: Move patient to fresh air. Monitor for respiratory distress. If cough or difficulty breathing develops, evaluate for respiratory tract irritation, bronchitis, or pneumonitis. Administer oxygen and assist ventilation as required.

Skin: Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush with running water for at least 20 minutes. Wash skin with soap and water.

Eyes: Irrigate exposed eyes with copious amounts of tepid water for at least 15 minutes. If irritation, pain, swelling, lacrimation, or photophobia persist, the patient should be seen in a health care facility.

Ingestion: Dilution: immediately dilute with 4 to 8 ounces (120 to 240 ml) of milk or water (not to exceed 4 ounces/120 ml in a child). Seek medical assistance.

LD50 (oral-rat) mg/kg:

STEL:

LC50 (rat) mg/kg:

Odour Threshold:

Permissible Exposure Limit:

TLV (ACGIH) : 0.5 mg/m³

NFPA Hazard	Health	Flammability	Reactivity	Special
Signals	0	1	0	

6. PREVENTIVE MEASURES

Personal Protective Equipment : Wear loose clothing, in good condition, with neck closed and sleeves rolled down. Hand and arm protection should be worn. Safety shoes should be about 15 cm high and laced. Face and eye protection is also recommended when heated asphalt is handled. Employees shall wear appropriate protective clothing. Including face shield (8-in minimum).

Handling : All chemicals should be considered hazardous. Avoid direct physical contact. Use appropriate, approved safety equipment. Untrained individuals should not handle this chemical or its container. Handling should occur in a chemical fume hood.

Storage : Storage location should be close to laboratory where it is to be used, so that only small amounts need to be transported. Carcinogens should be kept in only one section of storage area, explosion-proof refrigerator or freezer as required. The area should be appropriately labeled. An inventory should be kept showing the quantity of carcinogen and date it

was acquired. Facilities for dispensing should be contiguous to storage area.

Precautions :

7. EMERGENCY / FIRST AID MEASURES

FIRE:

Fire Extinguishing Media : Dry chemical carbon dioxide.

Special Procedure : Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible.

Unusual Hazards :

EXPOSURE: First Aid Measures:

Inhalation: Move patient to fresh air. Monitor for respiratory distress. If cough or difficulty breathing develops, evaluate for respiratory tract irritation, bronchitis, or pneumonitis. Administer oxygen and assist ventilation as required.

Skin: Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush with running water for at least 20 minutes. Wash skin with soap and water.

Eyes: Irrigate exposed eyes with copious amounts of tepid water for at least 15 minutes. If irritation, pain, swelling, lacrimation, or photophobia persist, the patient should be seen in a health care facility.

Ingestion: Dilution: immediately dilute with 4 to 8 ounces (120 to 240 ml) of milk or water (not to exceed 4 ounces/120 ml in a child). Seek medical assistance.

Antidotes / Dosages:

SPILLS :

Steps To Be Taken : Make no contact with the spilled material. Eliminate all ignition sources and ground all equipment. Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Waste Disposal Method: Dump into a landfill site.

8. ADDITIONAL INFORMATION / REFERENCES

9. MANUFACTURERS / SUPPLIERS DATA

NAME OF FIRM :	Contact person
MAILING ADDRESS :	in Emergency :
TELEPHONE / TELEX NOS :	Local Bodies involved :
TELEGRAPHIC ADDRESS :	Standard Packing :
OTHERS :	Trem Card Details / Ref :

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