



MATERIAL SAFETY DATA SHEET

Oxidized Bitumen 85/25

Product Name: Oxidized Bitumen 85/25

Other Names: Blown Bitumen 85/25, Oxidized Asphalt 85/25

Product Type: Oxidized petroleum bitumen

Recommended Uses: Waterproofing membranes, roofing products, insulation, pipe coating, joint sealing, adhesives, flooring compounds, and industrial applications.

1. Identification of the Substance and Company

Product Identifier: Oxidized Bitumen 85/25

Chemical Family: Petroleum hydrocarbon

CAS Number: 64742-93-4

EC Number: 265-196-4

2. Hazard Identification

Classification

At normal ambient temperatures, Oxidized Bitumen 85/25 is generally not classified as hazardous. However, heated product may cause severe thermal burns, and fumes released during heating may irritate the respiratory system.

Main Hazards

- Hot or molten bitumen can cause severe skin and eye burns.
- Heating may generate fumes, vapours, hydrogen sulfide and other irritating gases.
- Prolonged exposure to bitumen fumes may cause headache, dizziness, nausea, and respiratory irritation.
- Spilled molten material may create a fire and slipping hazard.
- Contact between hot bitumen and water may cause violent splashing or boil-over.

Label Elements

Signal Word: Warning

Hazard Statements:

- Hot material causes severe thermal burns.
- Fumes from heated product may irritate the eyes and respiratory tract.
- May release hydrogen sulfide in enclosed or poorly ventilated areas.

Precautionary Statements:

- Avoid breathing fumes generated during heating.
- Use only with adequate ventilation.
- Wear heat-resistant gloves, protective clothing, face protection, and safety footwear.
- Do not allow hot product to contact water.
- Wash exposed skin thoroughly after handling.

3. Composition and Information on Ingredients



Component	CAS Number	Concentration
Oxidized petroleum bitumen	64742-93-4	Approximately 100%
Hydrogen sulfide	7783-06-4	Trace amounts may accumulate during heating or storage

The product is a complex mixture of high-molecular-weight hydrocarbons obtained through controlled oxidation of petroleum bitumen.

4. First-Aid Measures

Inhalation

Move the affected person to fresh air. Keep the person at rest and under observation. If coughing, dizziness, breathing difficulty, nausea, or other symptoms continue, obtain medical attention.

Skin Contact — Cold Product

Wash the affected area with soap and water. Remove contaminated clothing. Do not use solvents or fuel to clean the skin.

Skin Contact — Hot or Molten Product

Immediately cool the affected area with clean, cool running water for at least 20 minutes. Do not use ice. Do not attempt to remove solidified bitumen from the skin. Do not pull away clothing stuck to the skin. Cover the burn loosely with a clean, sterile dressing and obtain urgent medical attention.

Eye Contact

For cold particles, rinse cautiously with clean water for at least 15 minutes. Remove contact lenses where easy to do.

For contact with hot material, cool the eye area immediately with clean water and obtain emergency ophthalmic treatment.

Ingestion

Ingestion is unlikely under normal industrial conditions. Rinse the mouth. Do not induce vomiting. Obtain medical advice if a significant quantity has been swallowed.

Most Important Symptoms

- Thermal burns
- Eye irritation
- Respiratory irritation
- Headache
- Dizziness
- Nausea

5. Firefighting Measures

Suitable Extinguishing Media

- Dry chemical powder
- Carbon dioxide
- Foam



- Water fog

Unsuitable Extinguishing Media

Do not direct a solid stream of water onto hot or burning bitumen. Water entering hot bitumen may cause violent splashing, frothing, or boil-over.

Specific Fire Hazards

Combustion may produce:

- Carbon monoxide
- Carbon dioxide
- Sulfur oxides
- Hydrogen sulfide
- Hydrocarbon fumes
- Dense smoke

Firefighter Protection

Firefighters should wear full protective clothing and self-contained breathing apparatus. Cool exposed containers with water fog from a safe distance. Prevent water from entering tanks or containers containing hot product.

6. Accidental Release Measures**Personal Precautions**

- Restrict access to the affected area.
- Eliminate ignition sources.
- Avoid breathing fumes.
- Wear appropriate protective equipment.
- Take special care when the product is hot or molten.

Environmental Precautions

Prevent the product from entering drains, sewers, waterways, or soil.

Cleanup Methods**Cold or Solid Product**

Allow the material to cool and solidify. Mechanically collect it using suitable tools and place it in labelled containers for reuse or disposal.

Hot or Molten Product

Contain the spill using sand, earth, or another non-combustible material. Allow it to cool before mechanical removal.

Do not use water directly on hot bitumen.

7. Handling and Storage**Safe Handling**

- Avoid skin and eye contact with hot material.
- Avoid inhalation of fumes.
- Ensure adequate local and general ventilation.
- Keep heating temperatures as low as reasonably practicable.
- Do not exceed recommended processing temperatures.
- Prevent water from entering hot bitumen tanks, vessels, or pipelines.



- Use equipment designed for hot petroleum products.
- Bond and ground transfer equipment where required.

Storage Conditions

- Store in a cool, dry, and well-ventilated location.
- Keep away from heat, flames, sparks, oxidizing agents, and water.
- Keep containers securely closed.
- Do not enter tanks or confined spaces without atmospheric testing and a valid confined-space entry procedure.
- Check storage tanks for possible hydrogen sulfide accumulation before opening or entry.

8. Exposure Controls and Personal Protection

Engineering Controls

Provide adequate mechanical or local exhaust ventilation, particularly near heated processing equipment.

Monitor the atmosphere where hydrogen sulfide or bitumen fumes may accumulate.

Personal Protective Equipment

Eye and Face Protection:

Chemical safety goggles and a full-face shield when handling hot material.

Hand Protection:

Heat-resistant, chemical-resistant gloves with protective cuffs.

Body Protection:

Long-sleeved protective clothing, heat-resistant overalls, and safety footwear. Clothing should cover exposed skin.

Respiratory Protection:

Normally not required for cold product in a well-ventilated area. Where fumes, vapours, or hydrogen sulfide may exceed occupational limits, use an approved respirator suitable for the identified contaminant.

Hygiene Measures

- Do not eat, drink, or smoke while handling the product.
- Wash hands and exposed skin after handling.
- Remove contaminated clothing before reuse.
- Keep work clothing separate from personal clothing.

9. Physical and Chemical Properties

Property	Typical Information
Physical state	Solid at ambient temperature
Appearance	Black, hard or semi-solid material
Odour	Characteristic petroleum odour
Penetration at 25°C	Approximately 20–30 dmm
Softening point	Approximately 80–90°C
Nominal grade	85/25

**Property**

Flash point

Initial boiling point

Water solubility

Solubility in organic solvents

Density

Vapour pressure

Auto-ignition temperature

Explosive properties

Oxidizing properties

Typical Information

Typically above 250°C

Not applicable

Insoluble

Soluble or partially soluble in hydrocarbon solvents

Approximately 1.00–1.10 g/cm³

Negligible at ambient temperature

Generally above 300°C

Not classified as explosive

Not oxidizing

10. Stability and Reactivity**Reactivity**

Not reactive under normal storage and handling conditions.

Chemical Stability

Stable under recommended conditions.

Possibility of Hazardous Reactions

Hot bitumen contacting water may cause violent foaming, splashing, or boil-over.

Conditions to Avoid

- Excessive heat
- Open flames
- Sparks
- Water contamination of hot product
- Poorly ventilated enclosed spaces

Incompatible Materials

- Strong oxidizing agents
- Water in contact with hot material
- Reactive chemicals capable of attacking hydrocarbons

Hazardous Decomposition Products

Thermal decomposition and combustion may generate carbon monoxide, carbon dioxide, sulfur oxides, hydrogen sulfide, smoke, and irritating hydrocarbon fumes.

11. Toxicological Information**Acute Toxicity**

The product is expected to have low acute toxicity under normal conditions of use.

Skin Effects

Cold material may cause mild mechanical irritation. Hot material causes severe thermal burns.

Eye Effects

Fumes may cause irritation. Hot product may cause serious thermal injury.

Inhalation Effects

Fumes from heated bitumen may irritate the nose, throat, and lungs. Excessive exposure may



cause headache, nausea, dizziness, or discomfort.

Hydrogen sulfide may be present in storage tanks or processing areas. High concentrations can cause rapid unconsciousness and may be fatal.

Ingestion

Not considered a likely route of occupational exposure. Ingestion may cause gastrointestinal discomfort.

Sensitization

Not expected to cause skin or respiratory sensitization under normal conditions.

Carcinogenicity

The product is not expected to present a carcinogenic hazard when handled at recommended temperatures with appropriate exposure controls. Prolonged or repeated exposure to concentrated fumes generated at excessive temperatures should be avoided.

Reproductive Toxicity

No significant reproductive effects are expected under normal occupational exposure conditions.

12. Ecological Information

Ecotoxicity

The product has low water solubility and is not expected to present significant acute aquatic toxicity in solid form.

Persistence and Degradability

Expected to degrade slowly in the environment.

Bioaccumulative Potential

Some hydrocarbon components may have the potential to bioaccumulate.

Mobility in Soil

The product is solid or highly viscous and has low mobility in soil.

Other Adverse Effects

Large releases may physically coat soil, plants, wildlife, or aquatic habitats. Prevent uncontrolled discharge into the environment.

13. Disposal Considerations

Dispose of the product and contaminated packaging in accordance with local, national, and international regulations.

Where possible, recover or recycle unused material.

Do not discharge into drains, sewers, soil, or surface water.

Solidified material may be disposed of through an approved industrial waste contractor.

Empty containers may retain hazardous residues or fumes and should not be cut, welded, heated, or reused without proper cleaning and authorization.

14. Transport Information

At ambient temperature, solid Oxidized Bitumen 85/25 is generally not regulated as dangerous goods.

When transported at elevated temperature, transport regulations for elevated-temperature



substances may apply.

Transport Information

UN Number — solid at ambient temperature

UN Number — transported hot

Proper Shipping Name

Transport Hazard Class

Packing Group

Marine Pollutant

Special Precautions

Classification

Generally not regulated

UN 3257 may apply

Elevated Temperature Liquid, N.O.S.

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III, where applicable

Generally no

Protect from water, excessive heat, and container damage

15. Regulatory Information

The product should be handled in accordance with applicable occupational health, environmental, chemical-control, and transport regulations in the country of manufacture, transit, and use.

Users must ensure compliance with local requirements concerning:

- Workplace exposure limits
- Hot-product handling
- Confined-space entry
- Hydrogen sulfide monitoring
- Waste disposal
- Dangerous-goods transport
- Product labelling

16. Other Information

Recommended Use

Industrial use only.

Key Safety Advice

- Avoid inhaling fumes from heated product.
- Protect against thermal burns.
- Never add water to hot bitumen.
- Test tanks and confined spaces for hydrogen sulfide and oxygen levels.
- Maintain adequate ventilation.
- Use suitable heat-resistant personal protective equipment.

Disclaimer

The information provided in this Safety Data Sheet is based on currently available knowledge and is intended to describe the product for health, safety, and environmental purposes. It does not constitute a product specification, warranty, or guarantee of any particular property. The user is responsible for verifying the suitability of the product for the intended application and complying with all applicable laws and regulations.