



Material Safety Data Sheet MSDS

Bitumen K170

Product Name: Bitumen K170

Product Type: Paving Grade Bitumen / Asphalt Binder

Common Use: Road construction, asphalt pavement, waterproofing, industrial coating, civil engineering applications

Appearance: Black, semi-solid to solid material

Odor: Mild petroleum odor

Supplier: Basekim Chemical Company

1. Identification

Product Identifier: Bitumen K170

Synonyms: Asphalt Binder K170, Paving Bitumen K170, Petroleum Bitumen

Recommended Use: Used as a binder in asphalt mixtures, road paving, waterproofing membranes, and construction applications.

Restrictions on Use: Not suitable for food, medical, or direct skin-contact applications.

2. Hazard Identification

GHS Classification

Bitumen K170 is not usually classified as highly hazardous at ambient temperature. However, heated bitumen can cause serious burns and may release fumes.

Main Hazards

- Hot bitumen can cause severe thermal burns.
- Fumes from heated bitumen may irritate eyes, nose, throat, and lungs.
- Contact with skin may cause irritation.
- Prolonged or repeated exposure to fumes should be avoided.
- Product may be slippery if spilled.
- Burning bitumen may produce toxic smoke and gases.

Signal Word

Warning



Hazard Statements

- May cause skin and eye irritation.
- Hot product causes burns.
- Inhalation of fumes may cause respiratory irritation.
- Combustion may produce carbon monoxide, carbon dioxide, sulfur oxides, and irritating smoke.

3. Composition / Information on Ingredients

Component	CAS Number	Concentration
Bitumen	8052-42-4	100%

Bitumen K170 is a complex mixture of high molecular weight hydrocarbons obtained from petroleum refining.

4. First Aid Measures

Eye Contact

If cold product enters the eyes, rinse carefully with clean water for at least 15 minutes. Seek medical attention if irritation continues.

If hot bitumen contacts the eyes, cool immediately with clean water and get urgent medical help. Do not try to remove solidified bitumen from the eye.

Skin Contact

For cold product, wash skin with soap and water.

For hot bitumen burns, cool the affected area immediately with clean running water. Do not remove hardened bitumen from the skin. Cover with a clean dressing and seek medical attention.

Inhalation

Move the person to fresh air. Keep them comfortable. Seek medical help if coughing, dizziness, breathing difficulty, or irritation continues.



Ingestion

Do not induce vomiting. Rinse mouth with water. Seek medical advice if discomfort occurs.

5. Fire Fighting Measures

Suitable Extinguishing Media

- Foam
- Dry chemical powder
- Carbon dioxide
- Water spray or fog

Unsuitable Extinguishing Media

Do not use a direct high-pressure water jet on burning bitumen, as it may spread the fire.

Fire Hazards

Bitumen is combustible when strongly heated. Fire may produce dense black smoke and harmful gases.

Hazardous Combustion Products

- Carbon monoxide
- Carbon dioxide
- Sulfur oxides
- Nitrogen oxides
- Hydrocarbon fumes
- Smoke and soot

Firefighter Protection

Firefighters should wear full protective clothing and self-contained breathing apparatus.

6. Accidental Release Measures

Personal Precautions

- Avoid contact with hot material.
- Avoid breathing fumes.



- Wear suitable PPE.
- Keep unnecessary personnel away.
- Prevent slips.

Environmental Precautions

Prevent entry into drains, soil, rivers, and groundwater.

Cleanup Methods

For cold solid product, collect mechanically and place into suitable containers.

For hot spills, allow the product to cool and solidify before removal. Do not use water directly on large hot spills unless required for cooling and safety.

7. Handling and Storage

Handling

- Avoid skin and eye contact.
- Avoid breathing fumes from heated product.
- Use good ventilation when heating.
- Do not overheat.
- Keep away from flames and ignition sources.
- Use proper equipment for hot bitumen handling.

Storage

Store in clean, dry, well-ventilated tanks or containers.

Keep away from:

- Strong oxidizing agents
- Open flames
- Excessive heat
- Water contamination

Recommended storage temperature depends on the application, but overheating should always be avoided.



8. Exposure Controls / Personal Protection

Engineering Controls

Use local exhaust ventilation where fumes may be generated. Provide proper temperature control during heating.

Personal Protective Equipment

Eye Protection: Safety goggles or face shield

Hand Protection: Heat-resistant gloves

Skin Protection: Long-sleeve protective clothing and safety boots

Respiratory Protection: Use suitable respirator if ventilation is poor or fumes exceed workplace limits

Hygiene Measures

Wash hands after handling. Do not eat, drink, or smoke while using the product.

9. Physical and Chemical Properties

Property	Value
Appearance	Black semi-solid / solid
Odor	Petroleum-like
Physical State	Semi-solid at ambient temperature
Color	Black
Solubility in Water	Insoluble
Density	Approx. 1.0–1.05 g/cm ³
Flash Point	Usually above 220°C
Boiling Point	Not applicable
Softening Point	Depends on specification
Penetration / Viscosity	According to K170 grade
Flammability	Combustible when heated
Vapor Pressure	Very low
Auto-Ignition Temperature	Above 300°C



10. Stability and Reactivity

Stability

Stable under normal handling and storage conditions.

Conditions to Avoid

- Excessive heat
- Open flames
- Sparks
- Overheating
- Contact with strong oxidizers

Incompatible Materials

- Strong oxidizing agents
- Strong acids
- Reactive chemicals

Hazardous Decomposition Products

Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, sulfur oxides, and hydrocarbon vapors.

11. Toxicological Information

Acute Toxicity

Bitumen is generally considered to have low acute toxicity under normal conditions.

Skin Contact

Cold bitumen may cause mild irritation after prolonged contact. Hot bitumen causes thermal burns.

Eye Contact

Fumes may irritate eyes. Direct contact with hot product can cause serious injury.



Inhalation

Fumes from heated bitumen may cause coughing, throat irritation, headache, or dizziness.

Ingestion

Ingestion is unlikely during normal industrial use. May cause stomach discomfort.

Carcinogenicity

Bitumen itself is not normally classified as carcinogenic under standard product use. However, prolonged exposure to bitumen fumes should be controlled and minimized.

12. Ecological Information

Environmental Effects

Bitumen is not readily biodegradable. It is insoluble in water and may physically contaminate soil and waterways.

Aquatic Toxicity

Large releases may harm aquatic life by coating surfaces and reducing oxygen transfer.

Mobility

Low mobility in soil due to its solid and hydrophobic nature.

Bioaccumulation

Not expected to bioaccumulate significantly.

13. Disposal Considerations

Dispose of waste bitumen according to local and national regulations.

Recommended methods:

- Recycling where possible



- Disposal through licensed waste contractor
- Controlled industrial waste disposal

Do not discharge into drains, watercourses, or soil.

14. Transport Information

Transport Item	Information
UN Number	Not regulated when transported cold
Proper Shipping Name	Bitumen / Asphalt
Hazard Class	Not classified for cold transport
Packing Group	Not applicable
Marine Pollutant	No
Special Note	Hot bitumen may be subject to specific transport requirements depending on temperature and local regulations

15. Regulatory Information

This product should be handled according to applicable safety and environmental regulations, including:

- GHS safety communication requirements
- OSHA workplace safety rules where applicable
- REACH / CLP rules where applicable
- Local transportation and environmental regulations

Users must check the exact regulations in the country of use.

16. Other Information

Recommended Applications

- Road paving
- Asphalt concrete production
- Highway construction
- Airport runway construction
- Waterproofing
- Roofing membranes
- Industrial protective coatings



Storage Life

Bitumen K170 has a long storage life when stored properly in clean, dry, closed containers or tanks and protected from contamination.

Safety Note

The main risk of Bitumen K170 comes from heating and handling at high temperature. Workers should avoid contact with hot product and control exposure to fumes.