



MATERIAL SAFETY DATA SHEET (MSDS)

Polymer Modified Bitumen PMB 70

Product Name: Polymer Modified Bitumen PMB 70

Product Type: Polymer Modified Asphalt Binder

Chemical Family: Petroleum bitumen modified with thermoplastic/elastomeric polymers

Recommended Use: Road paving, highways, airport runways, bridge decks, industrial pavements, waterproofing systems, asphalt repair and heavy-duty asphalt applications

Supplier: Basekim Kimyasal Ürünler LTD

Country of Supply: Turkey / UAE / International Export

Revision: 2026

SECTION 1 – Identification of the Substance and Supplier

Product Identification

Item	Information
Product Name	Polymer Modified Bitumen PMB 70
Common Name	PMB 70
Product Family	Polymer Modified Bitumen
Physical Form	Solid/semi-solid at ambient temperature; viscous liquid when heated
Main Use	Asphalt paving and construction
CAS No. of Base Bitumen	8052-42-4

Supplier

Basekim Kimyasal Ürünler LTD

PMB 70 is supplied for professional and industrial use in road construction, asphalt production, waterproofing and infrastructure projects.



SECTION 2 – Hazard Identification

GHS Status

PMB 70 in its cold or solid condition is generally not classified as a hazardous substance under normal industrial handling conditions.

However, **heated PMB 70 presents significant thermal and fume-related hazards.**

Major Hazards

- Hot PMB 70 can cause severe thermal burns.
- Heated material produces bitumen fumes.
- Excessive inhalation of fumes may irritate the nose, throat and respiratory system.
- Hot fumes may irritate the eyes.
- Spilled material may produce a slipping hazard.
- Heating above recommended temperatures can increase fume generation.
- Contact between hot PMB and water can cause violent splashing or foaming.
- Combustion may generate hazardous smoke and gases.

Signal Word

CAUTION – HOT MATERIAL

Precautionary Statements

- Avoid breathing fumes generated during heating.
- Wear heat-resistant gloves and protective clothing.
- Wear eye and face protection.
- Ensure adequate ventilation.
- Keep away from ignition sources.
- Never add water to hot molten PMB.
- Avoid release into drains, soil and waterways.



SECTION 3 – Composition / Information on Ingredients

PMB 70 consists primarily of petroleum bitumen combined with polymer modifiers and performance-enhancing additives.

Component	CAS Number	Typical Concentration
Petroleum Bitumen	8052-42-4	70–95%
Polymer Modifier such as SBS/EVA	9003-55-8 / applicable polymer CAS	3–15%
Stabilizers / Additives / Fillers	Various	0–10%

Actual formulation may vary according to required performance specifications.

The product does not normally contain intentionally added hazardous substances above applicable disclosure limits.

SECTION 4 – First Aid Measures

Inhalation

Move the affected person to fresh air immediately.

Keep the person at rest and comfortable for breathing. If coughing, dizziness or breathing difficulty continues, obtain medical attention.

Where exposure to concentrated hot bitumen fumes occurs, seek medical assessment.

Skin Contact – Cold Material

Wash exposed skin thoroughly with soap and water.

Remove contaminated clothing and clean it before reuse.

Skin Contact – Hot PMB 70

Immediately cool the affected area with clean running water for at least 15 minutes.

Do not attempt to remove solidified bitumen from the skin.



Do not use solvents, gasoline, kerosene or similar chemicals to remove the material.

Cover the burn with a sterile dressing and obtain immediate medical treatment.

Eye Contact

For fumes or dust, rinse cautiously with clean water for at least 15 minutes.

If molten PMB enters the eye, cool immediately with water and obtain urgent ophthalmological treatment.

Do not attempt to remove solidified bitumen mechanically.

Ingestion

Ingestion is unlikely during normal industrial use.

If swallowed:

- Rinse the mouth.
- Do not induce vomiting.
- Seek medical advice if discomfort develops.

Advice to Physician

Treat contact with molten PMB as a **thermal burn**. Solidified bitumen normally forms a protective sterile layer and should not be forcibly removed unless medically necessary.

SECTION 5 – Firefighting Measures

Flash Point

>250°C – Cleveland Open Cup

Suitable Extinguishing Media

Use:

- Dry chemical powder



- Foam
- Carbon dioxide
- Water fog for cooling surrounding equipment

Unsuitable Extinguishing Media

Do not apply a high-pressure water jet directly to molten PMB.

Water may cause violent splashing when it contacts hot bitumen.

Hazardous Combustion Products

Fire or thermal decomposition can generate:

- Carbon monoxide
- Carbon dioxide
- Sulfur oxides
- Hydrocarbon vapors
- Smoke
- Irritating organic compounds

Firefighter Protection

Firefighters should wear:

- Full protective clothing
- Heat-resistant equipment
- Positive-pressure self-contained breathing apparatus

Cool exposed containers with water spray from a safe distance.

SECTION 6 – Accidental Release Measures

Personal Precautions

- Restrict access to the spill area.
- Wear appropriate PPE.
- Avoid contact with hot material.
- Avoid breathing fumes.
- Eliminate unnecessary ignition sources.



Hot Product Spill

If safe to do so:

1. Stop the source of the release.
2. Prevent the product from reaching drains and waterways.
3. Allow molten PMB to cool and solidify.
4. Break up and mechanically collect the cooled material.
5. Transfer recovered material to suitable containers.

Cold Product Spill

Collect mechanically using suitable tools.

Recovered uncontaminated material may be recycled or reused where technically appropriate.

Environmental Precautions

Prevent release into:

- Surface water
- Sewers
- Drainage systems
- Soil
- Groundwater

Notify relevant authorities if significant environmental contamination occurs.

SECTION 7 – Handling and Storage

Safe Handling

PMB 70 normally requires heating for pumping, mixing and asphalt production.

Operators should:

- Use closed heating systems where possible.
- Provide adequate ventilation.



- Avoid unnecessary overheating.
- Avoid prolonged exposure to fumes.
- Prevent contact between hot PMB and water.
- Wear heat-resistant PPE.
- Keep equipment and transfer lines properly maintained.

Recommended Handling Temperature

A typical working range is approximately:

150–180°C

The exact temperature should depend on viscosity, mixing equipment and project specifications.

Avoid unnecessary prolonged heating at the upper end of the temperature range.

Storage

Store PMB 70:

- In clean, dry and properly designed bitumen tanks or containers.
- Away from water contamination.
- Away from strong oxidizing chemicals.
- Away from unnecessary ignition sources.
- With controlled heating where bulk storage is required.

Long-term storage at elevated temperature should be minimized because polymer-modified binders may experience phase separation or degradation.

Where extended heated storage is necessary, controlled circulation or agitation may be required.



SECTION 8 – Exposure Controls / Personal Protection

Engineering Controls

Use:

- Local exhaust ventilation
- Mechanical ventilation
- Enclosed transfer systems where practical
- Temperature controls
- Fume extraction near loading and mixing areas

Maintain bitumen fumes as low as reasonably practicable.

Personal Protective Equipment

Eye and Face Protection

Use:

- Chemical safety goggles
- Full face shield when handling molten product

Hand Protection

Wear insulated, heat-resistant gloves suitable for hot bitumen.

Body Protection

Wear:

- Long-sleeved protective clothing
- Heat-resistant workwear
- Long trousers
- Safety footwear

Avoid clothing that could trap molten material against the skin.

Respiratory Protection

Under normal outdoor operation with adequate ventilation, respiratory protection may not be required.



Where ventilation cannot adequately control bitumen fumes, use an appropriate occupational respirator selected according to local regulations and exposure assessment.

Hygiene

Wash hands before eating, drinking or smoking.

Do not eat, drink or smoke in processing areas.

SECTION 9 – Physical and Chemical Properties

Property	PMB 70
Appearance	Black solid/semi-solid
Physical State at Ambient Temperature	Solid to semi-solid
State When Heated	Viscous liquid
Odor	Mild petroleum / hydrocarbon odor
Penetration @ 25°C	50–90 dmm
Softening Point	≥55°C
Elastic Recovery	≥60% typical requirement
Density @ 25°C	Approx. 1.00–1.05 g/cm ³
Flash Point	>250°C
Solubility in Water	Insoluble
Vapor Pressure	Negligible at ambient temperature
Boiling Range	>400°C
Color	Black
Water Reactivity	Hot material may splatter violently on contact with water



SECTION 10 – Stability and Reactivity

Chemical Stability

Stable under recommended storage and handling conditions.

Conditions to Avoid

Avoid:

- Excessive temperatures
- Prolonged overheating
- Open flames
- Water entering molten PMB
- Strong oxidizing chemicals

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition or combustion may generate:

- Carbon monoxide
- Carbon dioxide
- Sulfur oxides
- Hydrocarbon fumes
- Irritating smoke

Hazardous Polymerization

Hazardous polymerization is not expected under normal storage or use conditions.



SECTION 11 – Toxicological Information

Acute Effects

Inhalation

High concentrations of hot bitumen fumes may cause:

- Headache
- Nausea
- Irritation
- Coughing
- Respiratory discomfort

Skin

Cold material may cause mild mechanical or prolonged-contact irritation.

Hot material causes serious thermal burns.

Eyes

Fumes can cause temporary eye irritation.

Molten material may cause severe thermal injury.

Ingestion

Low likelihood of exposure under normal industrial conditions.

Chronic Effects

Repeated or prolonged exposure to concentrated bitumen fumes should be minimized through proper temperature control and ventilation.

Good occupational hygiene and effective fume control significantly reduce exposure.



SECTION 12 – Ecological Information

PMB 70 is not readily biodegradable.

Because of its very low water solubility, significant migration into water is limited after solidification.

Nevertheless, bulk releases can physically contaminate:

- Soil
- Shorelines
- Drainage systems
- Aquatic habitats

Avoid uncontrolled environmental release.

Aquatic Toxicity

The solid product is not expected to cause significant acute aquatic toxicity under normal conditions. However, large physical releases may harm aquatic environments through coating or fouling.

Persistence

Highly persistent under environmental conditions.

Bioaccumulation

Limited data are available for the complete polymer-modified mixture.



SECTION 13 – Disposal Considerations

Recover and reuse uncontaminated PMB 70 where practical.

Solidified material may be recycled into approved asphalt applications where local specifications permit.

Dispose of contaminated or unusable product through a licensed waste contractor.

Do not:

- Discharge into drains.
- Dump into surface water.
- Dispose of uncontrolled material on soil.
- Burn the material in uncontrolled conditions.

Empty packaging should be drained, cooled and handled according to local waste regulations.

SECTION 14 – Transport Information

Cold / Solid PMB 70

Generally not classified as dangerous goods when transported at ambient temperature in solid form.

Hot / Molten PMB 70

Transport classification can change when the material is shipped at elevated temperature.

For bulk hot transport, applicable ADR/RID, IMDG or other national regulations for **elevated-temperature substances** must be checked according to the actual shipping temperature.

General Transport Information

Item	Information
Product	Polymer Modified Bitumen PMB 70
Cold/Solid Material	Generally not regulated as dangerous goods
Marine Pollutant	Generally No
Transport Precaution	Protect containers from damage and water contamination



Item	Information
Hot Transport	Classification depends on actual transport temperature and jurisdiction

SECTION 15 – Regulatory Information

PMB 70 should be handled according to applicable:

- GHS requirements
- Occupational health regulations
- Environmental regulations
- Transport regulations
- Waste disposal regulations
- National asphalt and construction standards

Regulatory requirements can vary by destination country.

Importers and users should confirm compliance with national requirements before commercial use.

SECTION 16 – Other Information

Product: Polymer Modified Bitumen PMB 70

Supplier: Basekim Kimyasal Ürünler LTD

Document Type: Material Safety Data Sheet

Recommended Use: Industrial and professional use only

Disclaimer

The information in this MSDS describes health, safety and environmental precautions associated with Polymer Modified Bitumen PMB 70. It does not constitute a product specification or performance guarantee.

Actual composition and technical characteristics may vary slightly according to production batch, raw materials and customer specifications.

Users must determine the suitability of the product for their intended application and comply with applicable national and international regulations.