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Material Safety Data Sheet (MSDS) – Bitumen PG 70-16

Section 1: Identification of the Substance and Company

Product Name

Bitumen PG 70-16

Synonyms

- PG 70-16 Bitumen
- PG 70-16 Asphalt Binder
- Performance Grade Bitumen 70-16
- Asphalt PG 70-16
- Performance Grade Asphalt Binder

Recommended Use

Road construction, asphalt paving, highway surfacing, airport pavements, industrial asphalt applications, and waterproofing systems.

Product Description

Bitumen PG 70-16 is a performance-grade asphalt binder designed for high-temperature pavement applications. The product delivers superior rutting resistance, thermal stability, and durability for heavy traffic roads and hot climate regions.

Manufacturer/Supplier

Supplier information varies by manufacturer.

Emergency Contact

Emergency contact information should follow the supplier's regional safety regulations.

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Section 2: Hazard Identification

GHS Classification

Bitumen PG 70-16 usually remains non-hazardous at ambient temperature. However, heated material may create serious hazards.

Hazard Classes

- Skin irritation – Category 2
- Eye irritation – Category 2A
- Specific target organ toxicity (single exposure) – Category 3
- Thermal burn hazard
- Combustible material when heated

Signal Word

Warning

Hazard Statements

- Causes skin irritation upon prolonged contact.
- Causes serious eye irritation.
- Heated material may cause severe thermal burns.
- Vapors or fumes may irritate the respiratory system.
- Excessive heating may release hazardous fumes.

Precautionary Statements

Prevention

- Avoid breathing fumes or vapors.
- Wear protective gloves and protective clothing.
- Use adequate ventilation during heating and handling.
- Avoid contact with hot material.

Response

- Wash exposed skin thoroughly after handling.

- If in eyes, rinse cautiously with water for several minutes.
- Seek immediate medical attention for thermal burns.
- Move affected person to fresh air if inhalation occurs.

Storage

- Store in tightly closed containers.
- Protect from extreme heat and ignition sources.
- Maintain recommended storage temperatures.

Disposal

Dispose of material according to local, regional, and national regulations.

Section 3: Composition and Information on Ingredients

Component	CAS Number	Concentration
Petroleum Asphalt	8052-42-4	95–100%
Polymer Additives (if modified)	Proprietary	0–5%

Chemical Family

Petroleum Hydrocarbon

Chemical Formula

Complex mixture of hydrocarbons

Section 4: First Aid Measures

General Advice

Immediately remove affected person from exposure area. Seek medical attention when symptoms persist.

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Inhalation

- Move person to fresh air immediately.
- Keep affected person comfortable for breathing.
- Seek medical assistance if irritation continues.

Skin Contact

Cold Material

- Wash skin thoroughly with soap and water.

Hot Material

- Cool affected area immediately with cold water.
- Do not remove adhered bitumen from skin.
- Cover burns with sterile dressing.
- Seek urgent medical treatment.

Eye Contact

- Flush eyes cautiously with water for at least 15 minutes.
- Remove contact lenses if present.
- Seek immediate medical attention.

Ingestion

- Do not induce vomiting.
- Rinse mouth thoroughly.
- Seek medical attention immediately.

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Section 5: Fire Fighting Measures

Suitable Extinguishing Media

- Dry chemical
- Carbon dioxide (CO_2)
- Foam
- Water fog

Unsuitable Extinguishing Media

Do not use direct water streams on hot bitumen fires.

Specific Hazards

Heating may generate:

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

Protective Equipment for Firefighters

- Self-contained breathing apparatus (SCBA)
- Full protective clothing

Section 6: Accidental Release Measures

Personal Precautions

- Avoid contact with hot material.
- Use protective equipment.
- Ensure adequate ventilation.

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Environmental Precautions

Prevent entry into:

- Drains
- Sewers
- Waterways
- Soil

Methods for Cleanup

Cold Material

- Collect mechanically.
- Transfer to suitable containers.

Hot Material

- Allow material to cool and solidify.
- Remove mechanically afterward.

Section 7: Handling and Storage

Handling

- Handle heated material carefully.
- Avoid inhalation of vapors.
- Use proper lifting and transfer equipment.
- Maintain safe heating temperatures.

Storage

- Store in dry, well-ventilated areas.
- Keep away from oxidizing agents.
- Avoid overheating.
- Recommended storage temperature: 150–180°C during handling.

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Section 8: Exposure Controls and Personal Protection

Exposure Limits

Exposure limits vary according to local regulations.

Engineering Controls

- Local exhaust ventilation
- Fume extraction systems
- Temperature monitoring systems

Personal Protective Equipment (PPE)

Respiratory Protection

Use approved respirators when ventilation remains insufficient.

Hand Protection

- Heat-resistant gloves
- Chemical-resistant gloves

Eye Protection

- Safety goggles
- Face shield

Skin Protection

- Long-sleeve protective clothing
- Heat-resistant boots

Section 9: Physical and Chemical Properties

Property	Value
Appearance	Black semi-solid
Odor	Petroleum odor

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Property	Value
Physical State	Solid/Semi-solid
Flash Point	>230°C
Solubility in Water	Insoluble
Density	Approx. 1.01–1.06 g/cm³
Softening Point	Depends on formulation
Viscosity	High
Boiling Point	Not applicable
Auto-Ignition Temperature	>300°C

Section 10: Stability and Reactivity

Chemical Stability

Stable under recommended storage and handling conditions.

Conditions to Avoid

- Excessive heat
- Open flames
- Strong oxidizing agents

Incompatible Materials

- Oxidizers
- Strong acids
- Reactive chemicals

Hazardous Decomposition Products

- Carbon monoxide
- Carbon dioxide
- Sulfur compounds

- Hydrocarbon vapors

Section 11: Toxicological Information

Likely Routes of Exposure

- Skin contact
- Eye contact
- Inhalation of fumes

Acute Effects

- Skin irritation
- Eye irritation
- Respiratory irritation
- Thermal burns

Chronic Effects

Long-term exposure to asphalt fumes may cause respiratory discomfort.

Carcinogenicity

Certain asphalt fumes may contain trace hazardous compounds under prolonged high-temperature exposure conditions.

Section 12: Ecological Information

Ecotoxicity

Bitumen may harm aquatic organisms if released in large quantities.

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Persistence and Degradability

Material degrades slowly in the environment.

Mobility

Insoluble in water; low mobility in soil.

Bioaccumulative Potential

Low under normal conditions.

Section 13: Disposal Considerations

Dispose of material according to:

- Local regulations
- National regulations
- Environmental guidelines

Do not discharge into waterways or drainage systems.

Section 14: Transport Information

Transport Classification	Information
UN Number	Not regulated under ambient conditions
Proper Shipping Name	Asphalt, Hot Liquid
Hazard Class	Depends on transport temperature
Packing Group	Not assigned
Marine Pollutant	No

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Transport Precautions

- Prevent overheating during transport.
- Use insulated containers for hot material.
- Secure containers properly.

Section 15: Regulatory Information

Regulations may include:

- OSHA requirements
- GHS classification standards
- Environmental protection regulations
- Local occupational safety standards

Users should comply with regional legal requirements.

Section 16: Other Information

Recommended Applications

- Highway paving
- Airport pavements
- Heavy traffic roads
- Industrial asphalt projects
- Bridge decks

Safety Recommendations

- Maintain proper heating temperatures.
- Avoid skin contact with hot material.
- Use appropriate PPE at all times.
- Ensure adequate ventilation during application.