



MATERIAL SAFETY DATA SHEET (MSDS)

Viscosity Grade Bitumen (VG 10 / VG 20 / VG 30 / VG 40)

Supplier: ATDM

1. Identification of the Substance and Company

Product Name: Viscosity Grade Bitumen
Grades Covered: VG 10, VG 20, VG 30, VG 40
Chemical Name: Petroleum Bitumen (Asphalt)
CAS Number: 8052-42-4
EC Number: 232-490-9
Product Type: Petroleum Hydrocarbon Binder

Recommended Use:

Road construction, asphalt production, paving, roofing, waterproofing, industrial coating applications.

Supplier:

ATDM – Industrial Petrochemical Supplier & Exporter

2. Hazard Identification

Classification (GHS)

Bitumen at ambient temperature is not classified as hazardous. However, **heated bitumen presents serious burn hazards.**

Main Hazards

- Severe thermal burns from hot material
- Irritation from fumes at high temperature
- Slipping hazard if spilled
- Possible release of hydrogen sulfide (H₂S) in confined spaces

Label Elements

Signal Word: **Warning**



Hazard Statements:

- Causes severe burns when hot
- Fumes may cause respiratory irritation
- May contain low levels of hydrogen sulfide

Precautionary Statements:

- Avoid breathing fumes
- Use protective clothing and gloves
- Ensure proper ventilation

3. Composition / Information on Ingredients

Component	CAS Number	Percentage
Petroleum Bitumen	8052-42-4	> 99%
Trace Sulfur Compounds	Proprietary	< 1%

Bitumen is a complex mixture of hydrocarbons derived from crude oil refining

4. First Aid Measures

Inhalation

Move exposed person to fresh air.
If breathing difficulty occurs, seek medical attention.

Skin Contact (Cold Material)

Wash with soap and water.

Skin Contact (Hot Bitumen)

Do NOT attempt to remove solidified bitumen.
Cool immediately with cold water for at least 10–15 minutes.
Seek urgent medical attention.

Eye Contact

Rinse cautiously with water for several minutes.
Seek medical help if irritation persists.



Ingestion

Do not induce vomiting.
Seek medical attention immediately.

5. Fire Fighting Measures

Suitable Extinguishing Media

- Foam
- Dry chemical powder
- Carbon dioxide
- Sand

Unsuitable Media

Do NOT use direct water jet on hot product.

Specific Hazards

Burning may produce:

- Carbon monoxide (CO)
- Carbon dioxide (CO₂)
- Sulfur oxides
- Dense black smoke

Protective Equipment

Firefighters must wear full protective gear and self-contained breathing apparatus.



6. Accidental Release Measures

Personal Precautions

- Avoid contact with hot material
- Use protective gloves and footwear
- Ensure ventilation

Environmental Precautions

Prevent entry into drains and waterways.

Clean-up Procedure

Allow hot material to cool and solidify.
Collect mechanically and dispose according to regulations.

7. Handling and Storage

Handling

- Avoid overheating
- Maintain recommended application temperatures
- Avoid breathing fumes
- Do not allow contact with water when hot

Storage

- Store in dry, well-ventilated area
- Protect from moisture
- Keep away from strong oxidizing agents
- Bulk storage tanks must be equipped with temperature control

Recommended Storage Temperature:
120°C – 180°C (depending on grade)



8. Exposure Controls / Personal Protection

Exposure Limits

Bitumen fumes (as asphalt fume):
Typically 5 mg/m³ (TWA) – check local regulations

Hydrogen Sulfide:
10 ppm (TWA)

Engineering Controls

- Local exhaust ventilation
- Fume extraction systems
- Closed heating systems

Personal Protective Equipment

Respiratory Protection:
Use respirator if ventilation is inadequate.

Hand Protection:
Heat-resistant gloves.

Eye Protection:
Safety goggles or face shield.

Skin Protection:
Heat-resistant protective clothing.

9. Physical and Chemical Properties

Property	Typical Value
Appearance	Black solid or semi-solid
Odor	Mild petroleum odor
Softening Point	Grade dependent
Flash Point	> 230°C

Property	Typical Value
Solubility	Insoluble in water
Density	1.00 – 1.06 g/cm ³
Viscosity	Grade dependent

10. Stability and Reactivity

Stability

Stable under recommended storage conditions.

Conditions to Avoid

- Excessive heat
- Contact with water when molten

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, sulfur oxides.

11. Toxicological Information

Acute Toxicity

Low toxicity at ambient temperature.

Skin Effects

Hot material causes severe burns.



Inhalation Effects

Fume exposure may cause:

- Irritation
- Headache
- Dizziness

Carcinogenicity

Unoxidized bitumen is not classified as carcinogenic by IARC under normal handling.

12. Ecological Information

Ecotoxicity

Low water solubility.
Product is not expected to be toxic to aquatic life in solid form.

Persistence

Slowly biodegradable.

Mobility

Insoluble in water; floats.

13. Disposal Considerations

Dispose according to local environmental regulations.

Do not discharge into:

- Soil
- Drainage systems
- Surface water

Recycling in asphalt production is recommended when possible.



14. Transport Information

UN Number

Not classified as dangerous goods at ambient temperature.

Transport Hazard Class

Not regulated (solid state).

If transported in molten form:

Follow local transport regulations for hot liquid materials.

Packing Group

Not applicable.

15. Regulatory Information

Complies with:

- GHS classification guidelines
- REACH (EU)
- OSHA Hazard Communication Standard

Check local country-specific regulations.

16. Other Information

This MSDS applies to all viscosity grade bitumen supplied by ATDM including:

- VG 10
- VG 20
- VG 30
- VG 40

The information provided is based on current knowledge and experience in handling petroleum bitumen products.

Users are responsible for ensuring compliance with local safety regulations.