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Technical Data Sheet (TDS) – PG 64-16 Bitumen

Product Name

PG 64-16 Bitumen

Product Description

PG 64-16 Bitumen is a performance-grade asphalt binder manufactured according to the Superpave PG grading system. This asphalt binder delivers reliable pavement performance under high-temperature and moderate low-temperature conditions. In addition, it provides excellent rutting resistance, thermal cracking resistance, and long-term durability for asphalt pavement applications.

Engineers and road contractors widely use **PG 64-16 asphalt binder** in highway paving, urban roads, airport pavements, and infrastructure projects. Furthermore, this binder supports improved asphalt rheology and enhances pavement life under medium to heavy traffic conditions.

The product complies with Superpave binder specifications and supports modern road construction requirements.

Product Identification

Property	Description
Product Name	PG 64-16 Bitumen
Product Type	Performance Grade Asphalt Binder
PG Classification	PG 64-16
Standard	AASHTO M320
Application	Asphalt pavement and highway paving
Appearance	Black viscous material
Base Material	Petroleum asphalt binder
Modification	Unmodified or modified depending on project requirements

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Recommended Applications

PG 64-16 bitumen suits a wide range of asphalt pavement applications. Therefore, contractors and infrastructure developers frequently select this binder for projects that require reliable pavement performance.

Typical Applications

- Highway construction
- Expressway paving
- Urban road development
- Heavy traffic roads
- Airport taxiways
- Industrial pavements
- Parking areas
- Bridge deck paving
- Hot mix asphalt production
- Municipal road infrastructure

Performance Characteristics

PG 64-16 asphalt binder offers balanced performance properties for moderate and warm climate regions.

Key Benefits

- Excellent rutting resistance
- Improved thermal cracking resistance
- Reliable fatigue cracking performance
- Long pavement service life
- Enhanced asphalt rheology
- Good workability during mixing and compaction
- Strong aggregate coating capability
- Consistent hot mix asphalt performance

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Technical Specifications

Property	Test Method	Specification
Performance Grade	AASHTO M320	PG 64-16
Rotational Viscosity @ 135°C	ASTM D4402	Max 3.0 Pa·s
Flash Point	ASTM D92	Min 230°C
Dynamic Shear (Original Binder) G*/Sinδ @ 64°C	AASHTO T315	Min 1.00 kPa
Dynamic Shear (RTFO Residue) G*/Sinδ @ 64°C	AASHTO T315	Min 2.20 kPa
Pressure Aging Vessel (PAV) Aging	AASHTO R28	Required
Fatigue Cracking G*Sinδ @ 25°C	AASHTO T315	Max 5000 kPa
BBR Stiffness @ -16°C	AASHTO T313	Max 300 MPa
BBR m-value @ -16°C	AASHTO T313	Min 0.300
Solubility	ASTM D2042	Min 99%
Density @ 25°C	ASTM D70	1.01–1.06 g/cm³

Typical Physical Properties

Property	Typical Value
Color	Black
Physical State	Semi-solid / Viscous liquid when heated
Odor	Petroleum odor
Specific Gravity	Approx. 1.03
Softening Characteristics	Stable under specified temperatures
Workability	Excellent
Adhesion to Aggregate	Strong

Temperature Guidelines

Proper temperature control ensures consistent asphalt performance and safe handling.

Operation	Recommended Temperature
Storage Temperature	150°C – 170°C
Mixing Temperature	150°C – 165°C

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Operation	Recommended Temperature
Compaction Temperature	140°C – 160°C
Maximum Heating Temperature	180°C

Packaging Options

PG 64-16 bitumen is available in several packaging formats depending on project and export requirements.

Available Packaging

- Bulk tanker shipment
- Bitutainer containers
- Steel drums
- Flexi tanks
- IBC containers (upon request)

Packaging options may vary according to destination and logistics requirements.

Storage Recommendations

Proper storage maintains product quality and extends usability.

Storage Guidelines

- Store in clean insulated tanks
- Maintain recommended storage temperature
- Avoid overheating for extended periods
- Prevent water contamination
- Keep storage systems closed when not in use
- Circulate product periodically during long-term storage

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Handling and Safety

Operators should follow standard industrial safety procedures during handling and application.

Safety Precautions

- Wear heat-resistant gloves and protective clothing
- Use eye and face protection
- Ensure proper ventilation during heating
- Avoid direct contact with hot material
- Prevent inhalation of fumes
- Follow local workplace safety regulations

First Aid Measures

Exposure Type	Recommended Action
Skin Contact	Cool affected area with clean water
Eye Contact	Flush eyes immediately with water
Inhalation	Move person to fresh air
Burns	Seek medical attention immediately

Environmental Information

PG 64-16 asphalt binder supports long-life pavement systems that reduce maintenance frequency and material consumption over time. However, operators should dispose of waste materials according to local environmental regulations.

Quality Assurance

Manufacturers test PG 64-16 according to internationally recognized asphalt binder standards. In addition, quality control laboratories verify compliance before shipment.

Applicable Standards

- AASHTO M320
- ASTM Standards

- Superpave Binder Specifications
- SHRP Performance Grading Requirements

Climate Suitability

PG 64-16 performs effectively in regions with:

- Warm summer temperatures
- Moderate winter temperatures
- Medium to heavy traffic conditions
- Urban and highway paving environments

Because of its balanced stiffness and flexibility, this grade supports durable asphalt pavement performance across various infrastructure applications.

Transportation Information

Transport PG 64-16 bitumen in insulated tankers or approved asphalt containers. Furthermore, maintain proper temperature during transit to preserve product consistency and workability.

Shelf Life

Under proper storage conditions, PG 64-16 maintains stable performance characteristics for extended periods. Nevertheless, prolonged overheating may affect binder properties.

Commercial Information

Buyers commonly request the following documents before procurement:

- Technical Data Sheet (TDS)
- Certificate of Analysis (COA)

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- Material Safety Data Sheet (MSDS)
- Quality Certificate
- Inspection Report

Several international suppliers provide PG 64-16 bitumen for road construction and infrastructure projects. For example, basekim supplies asphalt and bitumen materials for export markets and paving applications.