



Technical Data Sheet (TDS)

Bitumen PG 64-16

Product Identification

Product Name: Bitumen PG 64-16

Product Type: Performance Grade Asphalt Binder

Grade: PG 64-16

Standard: AASHTO M 320 / Superpave Performance Grading System

Application: Asphalt pavement and road construction

Product Description

Bitumen PG 64-16 is a Performance Grade (PG) asphalt binder engineered to provide reliable pavement performance under high and low service temperatures. The binder is designed to resist permanent deformation (rutting) at pavement temperatures up to 64°C while maintaining sufficient flexibility to minimize thermal cracking at temperatures down to -16°C.

PG 64-16 is widely used in highways, urban roads, airport pavements, industrial facilities, and commercial paving projects where durability, workability, and long-term pavement performance are critical requirements.

Performance Grade Classification

Property	Value
High Temperature Grade	64°C
Low Temperature Grade	-16°C
Performance Grade	PG 64-16
Classification System	Superpave PG





Typical Technical Properties

Original Binder Requirements

Test Property	Test Method	Requirement
Flash Point, °C	AASHTO T 48	≥ 230
Rotational Viscosity at 135°C, Pa·s	AASHTO T 316	≤ 3.0
Dynamic Shear ($G^*/\sin \delta$) at 64°C, kPa	AASHTO T 315	≥ 1.00

Rolling Thin Film Oven (RTFO) Residue

Test Property	Test Method	Requirement
Mass Loss, %	AASHTO T 240	≤ 1.00
Dynamic Shear ($G^*/\sin \delta$) at 64°C, kPa	AASHTO T 315	≥ 2.20

Pressure Aging Vessel (PAV) Residue

Test Property	Test Method	Requirement
Dynamic Shear ($G^* \cdot \sin \delta$) at 25°C, kPa	AASHTO T 315	≤ 5,000
Bending Beam Rheometer Stiffness at -16°C, MPa	AASHTO T 313	≤ 300
m-value at -16°C	AASHTO T 313	≥ 0.300

Key Performance Characteristics

High-Temperature Performance

- Excellent rutting resistance
- Improved resistance to permanent deformation
- Suitable for medium to heavy traffic conditions
- Stable performance under elevated pavement temperatures

Low-Temperature Performance

- Good flexibility at low temperatures
- Reduced risk of thermal cracking
- Enhanced pavement durability

Fatigue Resistance





- Improved resistance to repeated traffic loading
- Reduced fatigue cracking potential
- Extended pavement service life

Adhesion Properties

- Strong aggregate bonding characteristics
- Enhanced moisture damage resistance
- Consistent mixture performance

Applications

Bitumen PG 64-16 is recommended for:

- Highways and expressways
- Urban and municipal roads
- Airport pavements
- Industrial roads
- Commercial parking areas
- Infrastructure development projects
- Asphalt concrete production
- Heavy traffic roadways

Advantages

- Superior pavement durability
- Excellent rutting resistance
- Reliable thermal cracking resistance
- Long-term performance stability
- Good workability during mixing and paving
- Cost-effective lifecycle performance
- Compliance with Superpave specifications





Storage and Handling

Storage

- Store in insulated tanks equipped with heating systems.
- Maintain storage temperatures between **140°C and 170°C**.
- Avoid prolonged overheating.
- Prevent contamination with water, dust, or foreign materials.

Handling

- Use appropriate personal protective equipment (PPE).
- Follow local safety regulations for hot bitumen handling.
- Ensure adequate ventilation during loading and unloading operations.

Packaging and Supply

Available in:

- Bulk tanker trucks
- Bulk vessel shipments
- ISO tank containers
- Heated storage tank deliveries
- Export cargo shipments

Quality Assurance

Each production batch should be tested in accordance with relevant AASHTO and ASTM standards to verify compliance with PG 64-16 requirements. Quality control procedures ensure consistency, performance, and reliability for road construction applications.





Standards and Specifications

- AASHTO M 320 – Performance-Graded Asphalt Binder
- AASHTO T 315 – Dynamic Shear Rheometer (DSR)
- AASHTO T 313 – Bending Beam Rheometer (BBR)
- AASHTO T 316 – Rotational Viscosity
- AASHTO T 240 – RTFO Aging
- ASTM D6373 – Performance-Graded Asphalt Binder Specification

