



TECHNICAL DATA SHEET

Bitumen VG 40

Viscosity Grade Bitumen

1. Product Identification

Product Name: Bitumen VG 40

Type: Viscosity Grade Asphalt Binder

Grade: VG 40

Standard Compliance: Typically conforms to IS 73 (latest revision) or equivalent international viscosity grading standards

Application: Heavy-duty asphalt pavement and infrastructure projects

2. Product Description

Bitumen VG 40 is a high-viscosity asphalt binder specifically designed for use in areas subjected to heavy traffic loads and high service temperatures. This grade provides enhanced resistance to rutting and permanent deformation compared to lower viscosity grades.

VG 40 is recommended for highways, expressways, industrial pavements, airport runways, and high-stress road construction applications.

3. Typical Technical Specifications

Property	Test Method	Specification Limit
Absolute Viscosity at 60°C	ASTM D4402 / IS Method	≥ 3200 Poise
Kinematic Viscosity at 135°C	ASTM D2170	≥ 350 cSt
Penetration at 25°C (100g, 5 sec)	ASTM D5	40 – 60 (Typical Range)
Softening Point (Ring & Ball)	ASTM D36	≥ 50°C
Flash Point (Cleveland Open Cup)	ASTM D92	≥ 220°C
Ductility at 25°C	ASTM D113	≥ 40 cm
Solubility in Trichloroethylene	ASTM D2042	≥ 99%
Specific Gravity at 25°C	ASTM D70	1.01 – 1.06

Note: Values may slightly vary depending on refinery source and production batch.



4. Performance Characteristics

- High resistance to rutting
- Improved load-bearing capacity
- Enhanced stability at elevated temperatures
- Suitable for heavy axle loads
- Reduced deformation under sustained traffic

5. Recommended Applications

- National highways
- Expressways
- Industrial roads
- Container yards
- Airport taxiways and runways
- Heavy-duty urban intersections

6. Mixing & Compaction Guidelines

Recommended Mixing Temperature: 150°C – 170°C

Recommended Compaction Temperature: 140°C – 160°C

Avoid overheating above recommended limits to preserve binder properties.

7. Handling & Storage

- Store in insulated and heated tanks.
- Maintain temperature between 140°C and 170°C.
- Avoid prolonged exposure to temperatures above flash point.
- Prevent contamination with water or foreign materials.
- Use properly insulated tankers for transportation.

8. Packaging Options

- Bulk in bitumen tanker
- New steel drums (150–180 kg net weight)
- Jumbo bags
- Bitutainers for export shipments

Packaging can be customized based on buyer requirements.



9. Quality Control

Each production batch is tested in refinery laboratories to ensure compliance with viscosity grade standards. The shipment is accompanied by:

- Certificate of Analysis (COA)
- Quality Test Report
- Inspection Certificate (if required)

10. Health & Safety Information

- Use protective gloves and clothing during handling.
- Avoid direct contact with hot material.
- Ensure proper ventilation in heating areas.
- Refer to MSDS for complete safety guidance.

11. Shelf Life

Indefinite under proper storage conditions with controlled heating and no contamination.

12. Disclaimer

The information provided in this specification is based on standard production data and laboratory testing. Buyers are advised to verify suitability for their specific application before use.