

Analysis and Specification of Bitumen MC70

Introduction Bitumen MC70 is a medium-curing (MC) cutback bitumen commonly used in road construction and pavement maintenance. It is produced by blending penetration-grade bitumen with a solvent (kerosene) to reduce its viscosity for easy application. After application, the solvent evaporates, leaving behind the binder for durable adhesion.

Applications of Bitumen MC70

1. **Prime Coating:** Used to prepare the base before asphalt layer application.
2. **Tack Coating:** Applied between asphalt layers to improve adhesion.
3. **Cold Mix Asphalt:** Essential in the production of cold asphalt mixtures.
4. **Dust Control:** Helps in controlling dust on gravel roads.

Technical Specifications

Property	Unit	Specification
Kinematic Viscosity @60°C	cSt	70-140
Flash Point (Tag Open Cup)	°C	Min 38
Distillation to 360°C, Volume Recovered	%	Min 75
Distillation to 225°C, Volume Recovered	%	Max 20
Distillation Residue @360°C	%	Min 55
Penetration of Residue @25°C	dmm	80-120
Ductility of Residue @25°C	cm	Min 100
Solubility in Trichloroethylene	%	Min 99.0
Water Content	%	Max 0.2
Specific Gravity @25°C	-	0.96-1.02

Production Process

1. **Selection of Base Bitumen:** 85/100 or 60/70 penetration-grade bitumen is typically used.
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2. **Blending with Solvent:** The bitumen is blended with kerosene or similar solvents to achieve the required viscosity.
3. **Quality Control Testing:** The final product undergoes stringent tests to meet international standards.

Standards and Compliance Bitumen MC70 complies with ASTM D2027 and AASHTO M82 standards for medium-curing cutback bitumen.

Storage and Handling

- Store in well-ventilated areas away from heat and open flames.
- Use proper protective equipment during handling.
- Avoid prolonged storage to prevent changes in viscosity.

Safety Precautions

- Use personal protective equipment (PPE) when handling.
- Ensure proper ventilation during application.
- Follow local environmental regulations regarding disposal.

Conclusion Bitumen MC70 is a versatile and essential material in road construction and maintenance. Its controlled viscosity, reliable performance, and strong adhesive properties make it a preferred choice for various asphalt applications. Proper handling and adherence to specifications ensure optimal performance and durability in pavement structures.
