Technical Data Sheet (TDS)

Cutback Bitumen MC-250

Medium Curing Liquid Asphalt

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1. Product Description

Cutback Bitumen MC-250 is a **medium-curing (MC) liquid bitumen** manufactured by blending penetration grade asphalt cement with a controlled proportion of petroleum solvent (typically kerosene). The solvent temporarily reduces the viscosity of the bitumen, allowing easy spraying and application at lower temperatures.

After application, the solvent evaporates at a controlled rate, leaving a durable asphalt binder that provides strong adhesion and effective penetration into granular surfaces.

MC-250 is primarily used in **prime coat applications, surface dressing, cold mix asphalt production, and road maintenance works**.

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2. Recommended Applications

- Prime coat for untreated granular base layers
- Surface dressing and chip seal operations
- Cold mix asphalt production
- Road patching and maintenance
- Penetration macadam construction
- Low to medium traffic road construction

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3. Standards Compliance

Cutback Bitumen MC-250 typically complies with:

- ASTM D2027 – Standard Specification for Cutback Asphalt (Medium-Curing Type)
- AASHTO M 82 – Cutback Asphalt (MC)
- Equivalent international standards upon request

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4. Typical Technical Properties

Property	Test Method	Specification (ASTM MC-250)
Kinematic Viscosity @ 60°C	ASTM D2170	250 – 500 cSt
Flash Point (Tag Open Cup)	ASTM D3143	Min 38°C
Distillation Test	ASTM D402	As per standard
Residue from Distillation	ASTM D402	Min 67% by volume
Penetration of Residue @ 25°C	ASTM D5	120 – 300 dmm
Ductility of Residue @ 25°C	ASTM D113	Min 100 cm
Solubility in Trichloroethylene	ASTM D2042	Min 99%
Water Content	ASTM D95	Max 0.2%

Note: Values may vary slightly depending on production batch and applicable standard requirements.

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5. Physical Characteristics

- Appearance: Dark brown to black liquid
- Odor: Petroleum solvent odor
- Consistency: Medium viscosity liquid
- Solvent Type: Petroleum distillate (kerosene-based)

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6. Performance Characteristics

- Excellent penetration into granular base
- Controlled medium curing rate
- Strong bonding properties
- Easy spray application
- Reduced heating requirements compared to penetration grade bitumen
- Cost-effective prime coat solution

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7. Application Guidelines

Surface Preparation:

- Ensure surface is clean, dry, and free of dust or loose materials.
- Remove standing water before application.

Application Temperature:

- Typically applied at ambient temperature.
- Light heating (if required) should not exceed recommended safety limits.

Application Rate (Typical for Prime Coat):

- 0.7 – 1.5 liters per square meter
- Depends on base condition and project specification.

Curing Time:

- Varies based on temperature, humidity, and wind conditions.
- Adequate curing must occur before overlay placement.

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8. Handling and Safety

Cutback Bitumen MC-250 contains flammable petroleum solvents.

Safety Precautions:

- Keep away from open flames and ignition sources.
- Ensure proper ventilation during storage and application.
- Use appropriate personal protective equipment (PPE):
  - Safety gloves
  - Protective clothing
  - Eye protection
- Avoid inhalation of vapors.
- Follow local safety and environmental regulations.

Refer to the Material Safety Data Sheet (MSDS) for detailed safety information.

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9. Storage Recommendations

- Store in tightly sealed tanks or drums.
- Protect from direct sunlight and extreme temperatures.
- Maintain storage temperature below flash point.
- Avoid prolonged storage to prevent solvent loss.

Recommended storage period: Up to 6 months under proper conditions.

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10. Packaging Options

- Steel drums (typically 150–220 kg)
- Bulk tanker trucks
- Bitutainers
- IBC tanks (upon request)

Packaging may vary based on customer requirements and export regulations.

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11. Transportation

- Classified as flammable liquid for transport.
- Follow international shipping regulations (ADR, IMO, IATA as applicable).
- Proper labeling and documentation required.

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12. Quality Assurance

Each batch of Cutback Bitumen MC-250 undergoes strict quality control testing to ensure:

- Compliance with ASTM/AASHTO standards
- Accurate viscosity range
- Proper solvent proportion
- Consistent residue performance

A Certificate of Analysis (COA) is provided upon request.

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13. Environmental Considerations

- Contains volatile organic compounds (VOCs).
- Avoid release into water bodies or soil.
- Dispose of containers in accordance with environmental regulations.
- Consider regional environmental restrictions regarding cutback asphalt use.

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14. Disclaimer

The information provided in this Technical Data Sheet is based on standard production data and laboratory testing. Values are typical and do not constitute a guarantee. Users are responsible for verifying suitability for specific applications and compliance with local regulations.