Basekim
Chemical Production Co.Ltd.

**Technical Data Sheet (TDS) Bitumen PG 58-34**

**1. Product Description**

**Bitumen PG 58-34 is a performance-graded asphalt binder designed for regions with moderate summer temperatures and significantly cold winters. The "PG 58-34" classification means the binder provides reliable rutting resistance at high pavement temperatures up to +58°C, while maintaining excellent flexibility and crack resistance at low pavement temperatures down to –34°C. As a result, PG 58-34 is well-suited for areas where freeze–thaw cycles and thermal stress frequently damage conventional asphalt binders. With strong elasticity, high adhesion, and improved fatigue resistance, this binder delivers long-lasting pavement performance across demanding seasonal variations.**

**2. Applications**

**PG 58-34 is recommended for use in:**

- **Highways and main roads in cold and variable climates**
- **Municipal and urban roads**
- **Rural and regional road networks**
- **Mountainous and freeze–thaw zones**
- **Asphalt overlays and pavement rehabilitation**
- **Infrastructure requiring strong low-temperature crack resistance**

**3. Key Features & Benefits**

- **Wide Temperature Flexibility: Performs from +58°C to –34°C pavement temperatures.**
- **Superior Low-Temperature Performance: Reduces thermal cracking during harsh winters.**
- **Strong Rutting Resistance: Minimizes deformation in warm seasons.**
- **Improved Fatigue Resistance: Handles repetitive traffic loads effectively.**
- **High Elasticity & Adhesion: Enhances pavement durability and aggregate bonding.**
- **Stable All-Season Binder: Suitable for climates with strong seasonal swings.**

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**4. Technical Specifications (Typical Values)**

***Tested according to AASHTO M320 standards.***

| Property | Test Method | PG 58-34 Specification |
|---|---|---|
| Performance Grade | AASHTO M320 | PG 58-34 |
| Flash Point | AASHTO T48 | ≥ 230°C |
| Viscosity at 135°C | AASHTO T316 | ≤ 3 Pa·s |
| DSR (Original Binder), G*/sin δ @ 58°C | AASHTO T315 | ≥ 1.00 kPa |
| RTFO Mass Loss | AASHTO T240 | ≤ 1.00% |
| DSR (RTFO Residue), G*/sin δ @ 58°C | AASHTO T315 | ≥ 2.20 kPa |
| BBR Stiffness at –24°C | AASHTO T313 | ≤ 300 MPa |
| BBR m-value at –24°C | AASHTO T313 | ≥ 0.300 |
| Direct Tension Test at –34°C | AASHTO T314 | ≥ 1.5% strain |
| Rotational Viscosity at 165°C | AASHTO T316 | ≤ 2.0 Pa·s |

**5. Storage & Handling**

- Store in heated, clean tanks between 140°C and 165°C.
- Avoid overheating above 175°C to prevent oxidation and degradation.
- Maintain slow, consistent circulation for uniformity.
- Use insulated pipes and pumps for safe transfer.
- Prevent any water contact with hot bitumen.

**6. Safety & Precautions**

- Wear protective clothing, gloves, and goggles during handling.
- Avoid direct skin contact with hot binder.
- Ensure proper ventilation when heating.
- Keep water away from hot storage tanks to prevent boiling incidents.
- Follow all local transport and handling regulations.

***(Request the MSDS for detailed safety information.)***

**7. Packaging Options**

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- **Bulk supply in heated tankers**
- **New steel drums (180–200 kg net)**
- **Flexi-bags / Bitutainers**
- **Custom packaging available upon request**

**8. Shelf Life**
**Under recommended storage conditions, Bitumen PG 58-34 remains stable for 12 months without performance loss.**

**9. Compliance**
**PG 58-34 meets:**

- **AASHTO M320 Superpave Standards**
- **ASTM PG binder specifications**
- **Project-specific requirements on request**

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