OXIDIZED BITUMEN 115/15

(Blown Bitumen 115/15)

1. Product Description

Bitumen 115/15 is a high–softening point oxidized (air-blown) bitumen produced by controlled air oxidation of selected petroleum vacuum bottom. The oxidation process increases softening point and reduces penetration, resulting in a harder, more temperature-resistant material compared to penetration grades.

Bitumen 115/15 is specifically engineered for industrial waterproofing, roofing membranes, pipe coating, mastic production, and insulation systems where high thermal stability and low flow characteristics are required.

This grade provides excellent adhesion, chemical resistance, and durability in both hot and moderate climate conditions.

2. Typical Applications

Bitumen 115/15 is widely used in:

- Roofing membranes (APP & oxidized membranes)
- Bituminous felt production
- Waterproofing systems (foundations, basements, tunnels)
- Industrial mastic and joint fillers
- Pipe coating and anti-corrosion systems
- Adhesives and sealants
- Electrical insulation compounds
- Sound-damping sheets
- Battery sealing compounds

It is especially suitable where **high softening point and structural rigidity** are critical.

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3. Manufacturing Process

Bitumen 115/15 is produced through an air-blowing process:

1. Selected penetration bitumen is heated.
2. Controlled air is injected at elevated temperature.
3. Oxidation modifies molecular structure.
4. Asphaltene content increases.
5. Softening point rises.
6. Penetration value decreases.

The final product is homogeneous, stable, and resistant to flow at elevated temperatures.

4. Technical Specifications

Physical & Chemical Properties

Property	Test Method	Specification
Softening Point (°C)	ASTM D36	113 – 120
Penetration @25°C (0.1 mm)	ASTM D5	10 – 20
Flash Point (°C)	ASTM D92	≥ 230
Solubility in CS_2 (%)	ASTM D4	≥ 99
Loss on Heating (%)	ASTM D6	≤ 0.2
Specific Gravity @25°C	ASTM D70	1.01 – 1.06
Ductility @25°C (cm)	ASTM D113	≥ 1.5
Spot Test	AASHTO T102	Negative
Appearance	Visual	Black solid, homogeneous

Values are typical and may slightly vary depending on production batch.

5. Performance Characteristics

Bitumen 115/15 provides:

- High resistance to flow at elevated temperatures
- Excellent adhesion to concrete and metal surfaces
- Strong resistance to water penetration
- Good chemical resistance
- Long-term durability
- Structural rigidity
- Low temperature flexibility compared to harder blown grades
- Stable viscosity during heating

6. Advantages Over Lower Softening Grades

Compared to oxidized 85/25 or 90/25:

- Higher heat resistance
- Lower deformation under load
- Better performance in hot climates
- Improved dimensional stability

7. Handling & Application Guidelines

Heating Temperature:

Recommended application temperature: **150°C – 180°C**

Do not overheat above 200°C to avoid thermal degradation.

Safety Notes:

- Use indirect heating systems.
- Ensure proper ventilation.
- Avoid prolonged overheating.
- Follow MSDS safety procedures.

8. Packaging Options

Bitumen 115/15 is commonly supplied in:

- 25 kg Kraft paper bags
- 50 kg bags
- 150 kg new steel drums
- 180 kg steel drums
- 300 kg bitubags
- 1 MT jumbo bags
- Bulk tanker (upon request)

Custom packaging available depending on project requirements.

9. Storage Conditions

- Store in dry, shaded area.
- Avoid direct sunlight.
- Keep away from strong oxidizing agents.
- Shelf life: Up to 10 years under proper storage.

10. Quality Control

Each batch of Bitumen 115/15 is tested before shipment.
COA (Certificate of Analysis) is issued per lot.

Testing includes:

- Softening point verification
- Penetration test
- Flash point
- Solubility
- Homogeneity inspection

11. Transportation

Bitumen 115/15 is generally **not classified as dangerous goods** in solid form.

If transported hot in bulk, follow local transport safety regulations.

12. Technical Support

For product selection, compatibility testing, or project-specific recommendations, technical consultation is available upon request.