



TECHNICAL DATA SHEET (TDS)

BITUMEN AP-1

Penetration Grade Asphalt Binder

1. PRODUCT IDENTIFICATION

Product Name: Bitumen AP-1

Product Type: Penetration Grade Asphalt Binder

Manufacturer/Supplier: Basekim

Origin: Petroleum-derived bitumen produced from refined vacuum bottom residue.

2. PRODUCT DESCRIPTION

Bitumen AP-1 is a penetration-grade asphalt binder designed for road construction, waterproofing membranes, industrial coatings, roofing products, sealants, and adhesive applications. The product provides an optimal balance between flexibility and hardness, making it suitable for moderate to warm climatic conditions.

Bitumen AP-1 exhibits excellent adhesion to aggregates and reinforcing materials, stable viscosity during heating, and good resistance to rutting and cracking in asphalt pavements. It is compatible with conventional asphalt production equipment and penetration-grade specifications used throughout Asia, Africa, the Middle East, and other international markets.

3. TYPICAL APPLICATIONS

Road Construction

- Hot mix asphalt production
- Binder courses
- Base courses
- Surface wearing courses
- Highway and urban road pavements

Waterproofing Industry

- APP/SBS membrane production
- Roofing membranes



- Waterproofing sheets
- Damp-proofing systems

Industrial Applications

- Bituminous paints
- Anti-corrosion coatings
- Primers
- Sealants
- Adhesives
- Insulation materials

Roofing Products

- Roofing felt manufacturing
- Roofing compounds
- Protective roofing layers

4. TECHNICAL SPECIFICATIONS

Physical Properties

Property	Unit	Specification	Test Method
Penetration at 25°C, 100 g, 5 sec	dmm	80 – 100	ASTM D5
Softening Point (Ring & Ball)	°C	46 – 52	ASTM D36
Specific Gravity at 25°C	-	1.01 ± 0.05	ASTM D70
Flash Point (COC)	°C	Min. 230	ASTM D92
Solubility in TCE	% wt	Min. 99.0	ASTM D2042
Ductility at 25°C	cm	Min. 100	ASTM D113

The above values are consistent with the published AP-1 properties and equivalent penetration-grade 80/100 bitumen specifications.

5. QUALITY REQUIREMENTS

After Heating Characteristics

Property	Specification	Test Method
Loss on Heating	Max. 0.5 wt%	ASTM D6
Drop in Penetration After Heating	Max. 20%	ASTM D6 / ASTM D5



Property	Specification	Test Method
Spot Test	Negative	AASHTO T102

6. PERFORMANCE CHARACTERISTICS

Advantages

- Excellent aggregate adhesion
- Stable viscosity during mixing and application
- Good flexibility under service conditions
- Resistance to rutting and deformation
- Reduced cracking tendency
- Smooth melting characteristics
- Excellent waterproofing performance
- Compatible with common asphalt additives
- Consistent processing behavior
- Long service life in pavement applications

7. RECOMMENDED PROCESSING TEMPERATURES

Parameter	Temperature Range
Storage Temperature	120 – 150°C
Pumping Temperature	135 – 155°C
Mixing Temperature	140 – 155°C
Application Temperature	140 – 155°C
Maximum Recommended Heating	180°C

These ranges are typical for penetration grade 80/100 asphalt binders and should be optimized according to plant conditions.

8. PACKAGING

Available packaging options include:

- New steel drums
- Poly bags
- Meltable bags
- Jumbo bags (1 MT)



- Bitutainers
- Bulk tanker delivery

Packaging availability may vary by destination and order quantity.

9. STORAGE AND HANDLING

- Store in dry, covered conditions.
- Avoid prolonged overheating above recommended temperatures.
- Prevent contamination with water, dust, or other materials.
- Use insulated tanks for long-term hot storage.
- Maintain gentle circulation during storage where applicable.
- Follow local safety procedures when handling heated bitumen.

10. SHELF LIFE

When stored under recommended conditions and protected from contamination, Bitumen AP-1 maintains its properties for extended periods without significant degradation.