

# BITUMEN 60-70 Penetration Grade Asphalt Cement

## General Description

It is a kind of bitumen which is produced during the process of oxidation of vacuum bottom (the bitumen production feedstock that derives from distillation tower residue in vacuum oil refineries) at bitumen production units in a manner that its penetration point (kind of test to indicate the hardness of bitumen) becomes between 60-70. Bitumen 60-70 has high flash point and high adhesion properties to aggregates, compatible with all types of aggregates.

## Typical Applications

- Construction and maintenance of flexible pavements
- Road surfacing and some industrial applications
- Road and airport constructions
- Road making at temperate regions

## Application Temperature

| APPLICATION            | RECOMMENDED TEMPERATURE | UNIT |
|------------------------|-------------------------|------|
| Storage temperature    | 120-150                 | °C   |
| Mixing temperature     | 135-155                 | °C   |
| Compacting temperature | 125-145                 | °C   |

## Product Specification

| ANALYSIS   | VALUE*      | UNIT              | TEST METHOD       |
|--|-------------|-------------------|-------------------|
| Density, 25 °C   | 1010-1060   | kg/m <sup>3</sup> | ASTM D70 or D3289 |
| Penetration, 25 °C   | 60-70       | mm/10             | ASTM D5           |
| Softening point  | 49-56       | °C                | ASTM D36          |
| Ductility, 25 °C   | 100 (Min)   | cm                | ASTM D113         |
| Loss on heating  | 0.2 (Max)   | wt %              | ASTM D6           |
| Drop in penetration after heating                            | 20 (Max)    | %                 | ASTM D5           |
| Flash point (Cleveland open cup)                             | 232 (Min)   | °C                | ASTM D92          |
| Solubility in trichloroethylene                              | 99.0 (Min)  | wt %              | ASTM D2042        |
| Spot test  | Negative    | ---               | AASHOT102**       |
| Viscosity, 60°C  | 2000±400    | P                 | ASTM D 2171       |
| Viscosity, 135°C   | 300 (Min)   | cSt               | ASTM D 2170       |
| <b>Performance after RTFOT method test to ASTM D-1754***</b> |             |                   |                   |
| Retained penetration after TFOT                              | 54 (Min)    | %                 | ASTM D5           |
| Ductility, 25 °C, 5 cm/min, cm after TFOT                    | 50          | cm                | ASTM D113         |
| Viscosity, 60 °C   | 10000 (Max) | P                 | ASTM D 2171       |

\* Typical values; not to be considered as product specification

\*\* American association of state highway officials

\*\*\* Residue from thin film oven test