



**BUOYANCY**<sup>®</sup>  
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## Penetration Grade – Bitumen 40/60

Penetration Grade Bitumen 40/60 is commonly used in road construction, surfacing and some industrial applications. All penetration grades supplied by BUOYANCY<sup>®</sup> are petroleum grade and manufactured from fractional / vacuum distillation of crude oil produced from vacuum residue feedstock. They are fully compliant to ASTM and AASHTO, equivalent to EN and BS international standards and test methods. Penetration Grade bitumen are specified by the penetration and softening point test.

The penetration grade bitumen has a thermoplastic property which causes the material to soften at high temperatures and to harden at lower temperatures. This unique temperature/viscosity relationship is important when determining the performance parameters such as the adhesion, rheology, durability and application temperatures of bitumen. Penetration grade bitumen is also used to manufacture asphalt mixes, cutback bitumen, emulsions and modified grades.

Properties	Units	Results	Test Methods
Penetration @25°C, 100g/ 5s	0.1mm	40-60	EN 1426
Softening Point, Ring & Ball	°C	48-56	EN 1427
<b>Resistance to Hardening@163°C</b>			
Change in Mass, Max	%Wt	0.5	EN 12607-1
Retained Penetration@25°C, Min	0.1mm	50	EN12607-1
Softening point after hardening, Min	°C	49	EN12607-1
<b>Other Properties</b>			
Flash Point Cleveland open cup, Min	°C	240	EN ISO 22592
Solubility in CS <sub>2</sub> , Min	%Wt	99.5	EN 12592
Kinematic viscosity @135 °C ,Min	mm <sup>2</sup> /s	325	EN12592
Paraffin Wax Content, Max	% Wt	4.5	EN12606-2
Penetration Index	-	-1.5 to 0.7	EN12591-Annexure A

**Packing available:** 150 ± 3 Kg, 180 Kg ± 3, 200 Kg ± 3Kg Net weight Steel drums and/or 300 Kg, 1000 Kg Poly/Jumbo bags

**Storage and Handling Recommendations:** Store in unopened containers. Storage temperature limits 1°C - 50°C. For normal operations, such as blending and transferring liquid bitumen, temperatures of 10°C - 40°C above the minimum pumping temperature are recommended.

### Recommended Application Temperatures:

**Storing:** 120°C - 150°C

**Mixing:** 135°C - 155°C

**Compacting:** 125°C - 145°C

**Accredited:** ISO9001:2015 | ISO 14001:2015 | ISO45001:2018