



**RK NORTHWEST REFINING & ENERGY COMPANY**  
**BITUMEN EVALUATION DEPARTMENT**

**DATE:**

**REPORT NO:**

**DESCRIPTION:**

Bitumen Penetration Grade 160/220 is a standard penetration grade Bitumen suitable for road construction and for the production of asphalt pavements with superior properties. This grade of Bitumen is mainly used in the manufacture of hot mix asphalt for bases and wearing courses. Penetration Grade Bitumen supplied by "RK NORTHWEST REFINING & ENERGY COMPANY" is petroleum grade bitumen, manufactured from fractional / vacuum distillation of crude oil. The bitumen supplied by "RK NORTHWEST REFINING & ENERGY COMPANY" is produced from vacuum residue (short residue) feedstock. Penetration Grade Bitumen are specified by the penetration and softening point test. Designation is by penetration range only. The penetration grade bitumen's have 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 BITUMEN GRADE 160/220 TECHNICAL DATA**

NO	TEST DESCRIPTION	UNIT	MIN	MAX	TEST METHOD
1	Specific Gravity @ 25 °C	°C	1.01	1.25	ASTM D70
2	Penetration @ 25 °C	MM	160	220	ASTM D5
3	Softening Point @ 25 °C	°C	35	43	ASTM D36
4	Ductility @ 25 °C	CM	100	---	ASTM D113
5	Flash Point	°C	230	---	ASTM D92
6	Solubility In Trichloroethylene	%	99	---	ASTM D4
7	Loss On Heating	%	---	0.8	ASTM D6
8	Drop In Penetration After Heating	%	9.2	---	ASTM D5 & D6

**Authorized Signatory**  
**Evaluation Department:**

**Authorized Signatory**  
**Laboratory Manager:**