



BITUMEN PENETRATION ANALYSIS 30/40

Characteristic	Unit	Value	Test Method
Specific Gravity At 25/25 °C	°C	1.01-1.06	ASTM D-7
Penetration At 25 °C	1.1 mm	30-40	ASTM D-5
Softening Point °C	°C	55-63	ASTM D-36
Ductility @25 °C	CM	100	ASTM D-113
Loss On Heating	Wt%	0.2 Max	ASTM D-6
Drop In Penetration After Loss on Heating		20 Max	ASTM D-5&D-6
Flash Point		250 Min	ASTM D-92
Solubility In CS ₂	WT%	99.5 Min	ASTM D-4
Spot Test	°C	Negative	AASHTO T102



BITUMEN PENETRATION 40/50

Characteristic	Unit	Value	Test Method
Specific Gravity At 25/25 °C	°C	1.01-1.06	ASTM D-7
Penetration At 25 °C	1.1 mm	30-40	ASTM D-5
Softening Point °C	°C	55-63	ASTM D-36
Ductility @25 °C	CM	100	ASTM D-113
Loss On Heating	Wt%	0.2 Max	ASTM D-6
Drop In Penetration After Loss on Heating		20 Max	ASTM D-5&D-6
Flash Point		250 Min	ASTM D-92
Solubility In CS2	WT%	99.5 Min	ASTM D-4
Spot Test	°C	Negative	AASHTO T102



BITUMEN PENETRATION ANALYSIS 60/70

Characteristic	Unit	Value	Test Method
Specific Gravity At 25/25 °C	°C	1.01-1.06	ASTM D-7
Penetration At 25 °C	1.1 mm	60-70	ASTM D-5
Softening Point °C	°C	49-56	ASTM D-36
Ductility @25 °C	CM	100 Min	ASTM D-113
Loss On Heating	Wt%	0.2 Max	ASTM D-6
Drop In Penetration After Loss on Heating		20 Max	ASTM D-5&D-6
Flash Point		250 Min	ASTM D-92
Solubility In CS ₂	WT%	99.5 Min	ASTM D-4
Spot Test	°C	Negative	AASHTO T102



BITUMEN PENETRATION ANALYSIS 80/100

Test Title	Result	Standard range	TEST Method
Penetration At 25 °C, 0.1MM	93	Min: 80 – Max: 100	ASTM D5
Specific Gravity At 25/25 °C	1.0165	—	ASTM D70
Softening Point °C	46.9	Min: 42 – Max: —	ASTM D36
Ductility @25 °C CM	>100	Min: 100 – Max: —	ASTM D113
Flash Point, °C	322	Min: 230 – Max: —	ASTM D92
Solubility In TCE, WT%	99.8	Min: 99 – Max: —	ASTM D2042
Loss On Heating, Wt%	0.004	—	ASTM D6
Drop In Penetration After Loss on Heating, %	9.67	—	ASTM D5&D6
Spot Test, (Naphtha)	Neg	Negative	AASHTO T102



BITUMEN PENETRATION ANALYSIS 200/300

TEST / PROPERTY	TEST METHOD	RESULT	SPECIFICATION RANGE DECLARED BY PRINCIPA
PENETRATION AT 25°C , 0.1MM	ASTM D5	299	260 MIN.
SOFTENING POINT (R&B), °C	ASTM D36	38.7	34/41
DENSITY AT 25°C , GR/CM3	ASTM D70	1.0069	1.02 MAX.
FLASH POINT, °C	ASTM D92	324	117 MIN.
DUCTILITY AT 25°C (5CM/MIN), CM	ASTM D113	>100	ASTM D-6
SOLUBILITY IN TCE, WT%	ASTM D2042	99.8	99.0 MIN.
ASH CONTENT, WT%	ASTM D482	0.03	0.08 MAX.
KINEMATIC VISCOSITY AT 100°C , CST	ASTM D445	754	--



AFTER TFOT AT 163°C, ASTM D1754

RETAINED PENETRATION, %	ASTM D5	65.21	50 MIN
DUCTILITY AT 25°C (5CM/MIN), CM	ASTM D113	>100	40 MIN.
CHANGE OF MASS, WT%	ASTM D1754	0.082	0.8 MAX.
SULPHUR CONTENT, WT%	ASTM D4294/16	3.68	3.80 MAX
MICRO CARBON RESIDUE, WT%	ASTM D4530/15(20)	17.8	21.0 MAX.

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