

Requirements for penetration-Graded Asphalt Binder for Use in Pavement Construction

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Characteristics	Unit	Test method	30/40		40/50		60/70		85/100		120/150		200/300	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Penetration at 25°C , 100 g ,5 s	0.1mm	ASTM D5	30	40	40	50	60	70	85	100	120	150	200	300
Softening point	° C	ASTM D36	55		50		46		42		38		32	
Kinematic viscosity at 135°C	cSt	ASTM D2170	450		400		300		250		175		125	
Flash point (cleveland open cup)	° C	ASTM D92	230		230		230		230		220		175	
Ductility at 25°C , 5 cm/min	cm	ASTM D113	100		100		100		100		100		100	
Solubility in Trichloroethylene	%	ASTM D2042	99		99		99		99		99		99	
Specific Gravity at 25/25°C	kg/m3	ASTM D70	1.01		1.01		1.01		1.01		1.01		1.01	
Spot Test		A.A.SH.T.O	Negative		Negative		Negative		Negative		Negative		Negative	
Thin-Film Oven Test (TFOT)														
Loss on heating	%wt	ASTM D6		0.8		0.8		0.8		1		1.3		1.5
Retained penetration after TFOT	%	ASTM D5	55		55		52		47		42		37	
Ductility at 25°C , 5 cm/min after TFOT	cm	ASTM D113		50		75		100		100	