

Penetration Grade – ASTM / AASHTO

Analysis	Unit	40-50	60-70	85-100	120-150	150-200	200-300	Test Method
		Limit						
Density @ 25°C	kg/m ³	1010-1060	1010-1060	1000-1050	1000-1050	1000-1050	990-1040	ASTM D70 or D3289
Penetration @ 25°C	mm/10	40-50	60-70	85-100	120-150	150-200	200-300	ASTM D5
Softening Point	°C	49 min	46 min	42 min	38 min	36 min	32 min	ASTM D36
Ductility @ 25°C	cm	100 min	100 min	100 min	100 min	100 min	100 min	ASTM D113
Loss on heating	wt%	0.2 max	0.2 max	0.5 max	0.5 max	0.5 max	1 max	ASTM D6
Drop in penetration after heating	%	20 max	20 max	20 max	20 max	20 max	37 min	ASTM D5
Flash point	°C	232 min	232 min	232 min	218 min	218 min	177 min	ASTM D92
Solubility in Trichloroethylene	wt%	99.0 min	99.0 min	99.0 min	99.0 min	99.0 min	99.0 min	ASTM D2042
Spot test	---	Negative	Negative	Negative	Negative	Negative	Negative	AASHTO T 102
Viscosity @60°C	P	4000±800	2000±400	1000±200	450±90	250±50	200±50	ASTM D 2171
Viscosity@135°C	cSt	400 min	300 min	250 min	170 min	150 min	80 min	ASTM D 2170
Test on Residue From Thin Film Oven Test (ASTM D1754)								
Retained Penetration after (T.F.O.T), %	%	58 min	54 min	50 min	46 min	46 min	40 min	ASTM D5
Ductility , (25 °C),5cm/min , cm after TFOT	cm	50	50	75	100	100	100	ASTM D113
Viscosity @ 60°C	P	20000 max	10000 max	5000 max	2250 max		1250 max	ASTM D 2171