Bitumen is graded based on absolute viscosity at 60 ºC or kinematic viscosity at 135 ºC. The SI physical unit of dynamic viscosity is Poise and kinematic viscosity is expressed in Centi Stokes. Pure bitumen has been graded based on AASHTO-M226 and ASTM-D3381 standards.
Table 1-1: Technical Specifications of Pure Bitumen Based on Viscosity at 60 oC (AASHTO-M226)

Test	Viscosity					
	5/2 AC-	5 AC-	10 AC-	20 AC-	30AC-	40AC-
Viscosity at 60 C	50±250	100±500	200±1000	400±2000	600±3000	800±4000
Viscosity at 135 C	125	175	250	300	350	400
Penetration at 25 C, 100 grams, five seconds	220	140	80	60	50	40
	163	177	219	232	232	23
Solubility in trichloroethylene	0/99	0/99	0/99	0/99	0/99	0/99
Test on the residue of thin bitumen layer:						
Heating loss	-	0/1	5/0	5/0	5/0	5/0
Viscosity at 60 C	1000	2000	4000	8000	12000	16000
Ductility at 25 C, 5cm/min	(1)100	100	75	50	40	25
Stain Test						
Naphtha Solvent	Negative					
Naphtha-Xylene Solvent, Xylene Percentage	Negative					

Naphtha-Xylene Solvent, Xylene Percentage	Negative

Table 1-3: Technical Specifications of Pure Bitumen Based on Viscosity at 60 oC (AASHTO-M226)

Test	Viscosity				
	10AR-	20AR-	40AR-	80AR-	160AR-
Viscosity at 60 C	250±1000	500±2000	1000±4000	2000±8000	4000±16000
Viscosity at 135 C	140	200	275	400	550
Penetration at 25 C, 100 grams, five seconds	65	40	25	20	20
Penetration at 25 C, 100 grams, five seconds. minimum	-	40	45	50	52
Ductility at 25 C, 5cm/min	(2)100	(2)100	75	75	75
Test on Primary Bitumen					
Flash point, Cleveland open cup	205	219	227	232	238
Solubility in trichloroethylene	0/99	0/99	0/99	0/99	0/99

Table 1-4: Technical Specifications of Pure Bitumen Based on Viscosity at 60 oC (AASHTO-M226)

Test	Viscosity				
	5/2AC-	5AC-	10AC-	20AC-	40AC-

Viscosity at 60 C	250±50	500±100	1000±200	2000±800	
Viscosity at 135 C	80	110	150	210	300
Penetration at 25 C, 100 grams, five seconds	200	120	70	40	20
&nads;	163	177	219	232	232
Solubility in trichloroethylene	0/99	0/99	0/99	0/99	0/99
Test on Residue :					
Viscosity at 60 C	1250	2500	5000	10000	20000
Ductility at 25 C, 5cm/min	(1)100	100	50	20	10

Table 1-5: Technical Specifications of Pure Bitumen Based on Viscosity at 60 oC (AASHTO-M226)

Test	**Viscosity**					
	5/2AC-	5AC-	10AC-	20AC-	30AC-	40AC-
Viscosity at 60 C	250±50	500±100	1000±200	2000±400	3000±600	4000±800
Viscosity at 135 C	125	175	250	300	350	400
Penetration at 25 C, 100 grams, five seconds	220	140	80	60	50	40
Flash point, Cleveland open cup	163	177	219	232	232	232
Solubility in trichloroethylene	0/99	0/99	0/99	0/99	0/99	0/99

Test on the residue of thin bitumen layer:						
Viscosity at 60 C	1250	2500	5000	10000	15000	20000
Ductility at 25 C, 5cm/min	(1)100	100	75	50	20	10

Table 1-6: Technical Specifications of Pure Bitumen Based on Viscosity at 60 oC (AASHTO-M226)

Test on the residue of thin bitumen layer	Viscosity				
	1000AR-	2000AR-	4000AR-	8000AR-	16000AR-
Viscosity at 60 C	1000±250	2000±500	4000±1000	8000±2000	16000±4000
Viscosity at 135 C	140	200	275	400	550
Penetration at 25 C, 100 grams, five seconds	65	40	25	20	20
Penetration at 25 C, 100 grams, five seconds. minimum	-	40	45	50	52
Ductility at 25 C, 5cm/min	(1)100	(2)100	75	75	75
Test on residue:					
Flash point, Cleveland open cup	205	219	227	232	238
Solubility in trichloroethylene	0/99	0/99	0/99	0/99	0/99