TECHNICAL DATA SHEET

SUPER PAVE PERFORMANCE GRADE BITUMEN PG 58 SERIES

Description

Performance Grade (PG) bitumen is bitumen which is graded based on its performance at different temperatures. The LTPP has given certain algorithm to calculate the temperature of the pavement based on the temperature of the air above. From this, the highest and the lowest temperatures of the pavement is calculated and the bitumen that performs well in that temperature range is selected.

Technical Data

PROPERTYS	BITUMEN PERFORMANCE GRADES				
	PG82-10	PG 82-16	PG82-22	PG 82-28	PG82-34
Average 7-day Maximum Pavement Design Temperature °C[a]	<82	<82	<82	<82	<82
Minimum Pavement Design Temperature °C[a]	-10	-16	-22	-28	-34
ORIGINAL BINDER					
Flash Point Temp, T 48, Minimum (°C)	230	230	230	230	230
Viscosity, ASTM D 4402:[b] Maximum, 3 Pa*s, Test Temp, °C	135	135	135	135	135
Dynamic Shear, TP 5:[c] G*/sinδ[f], Minimum, 1.00 kPa Test Temp @ 10 rad/s, °C	82	82	82	82	82
ROLLING THIN FILM OVEN RESIDUE(T240)					
Mass Loss, Maximum, percent	1.00	1.00	1.00	1.00	1.00
Dynamic Shear, TP 5: G*/sinδ[f], Minimum, 2.20 kPa Test Temp @ 10 rad/s, °C	82	82	82	82	82
PRESSURE AGING VESSEL RESIDUE(PP1)					
PAV Aging Temperature, °C[d]	100(110)	100(110)	100(110)	100(110)	100(110)
Dynamic Shear, TP 5: G*/sinδ[f], Maximum, 5000 kPa Test Temp @ 10 rad/s, °C	40	37	34	31	28
PHYSICAL HARDENING[e]					
Creep Stiffness, TP 1 Determine the critical cracking temperature as described in PP 42	0	-6	-12	-18	-24
Direct Tension, TP 3 Determine the critical cracking temperature as described in PP 42	0	-6	-12	-18	-24

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[a] Pavement temperatures are estimated from air temperatures using an algorithm contained in the LTPP Bind program, may be provided by the specifying agency, or by following the procedures as outlined in MP 2 and PP 28.

[b] This requirement may be waived at the discretion of the specifying agency if the supplier warrants that the asphalt binder can be adequately pumped and mixed at temperatures that meet all applicable safety standards.

[c] For quality control of unmodified asphalt binder production, measurement of the viscosity of the original asphalt binder may be used to supplement dynamic shear measuremments of G*/sinδ at test temperatures where the asphalt is a Newtonian fluid.

[d] The PAV aging temperature is based on simulated climatic conditions and is one of three temperatures 90°C, 90°C or 110°C. The PAV aging temperature is 100°C for PG 58- and above, except in desert climates, where it is 110°C.

[e] Physical hardening -- TP 1 is performed on a set of asphalt beams according to Section 12, except the conditioning time is extended to 24 hours ± 10 minutes at 10°C above the minimum performance temperature. The 24-hour stiffness and *m*-value are reported for information purposes only.

[f] G*/sinδ = high temperature stiffness and G*/sinδ = intermediate temperature stiffness

Application

This Bitumen is being used in Road, Airport constructions.

Packing

Steel drums

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