



# ARIAN INTERNATIONAL FZ-LLC

## Bitumen Grade: PMB - PG 88-22E

### Description and Applications:

PG system is a method of measuring asphalt binder performance; In a Super-pave grading system, binders are classified according to their performance in extreme hot and cold temperatures and called Performance Grade Bitumen.

The main purpose of grading and selecting asphalt binder using the Performance Grade system is to ensure that the binder has the appropriate properties for environmental conditions in the field. Performance Grade asphalt binders are selected to meet expected climatic conditions as well as traffic speed and volume adjustments.

Therefore, the Performance Grade system uses a common set of tests to measure the physical properties of the binder that can be directly related to the field performance of the pavement at its service temperatures by engineering principles.

### Characteristics and Specifications:

Based on ASTM D6373 Bitumen.

### Health and Safety:

Detailed health and safety information for this product is provided in the Material Safety Data Sheet (MSDS), available upon request.

No	Property	Test Standard	Acceptable Range
<b>Original Binder</b>			
1	Rotational Viscosity, 135 °C	AASHTO T316	≤3 Pa.s
2	Flash Point, °C	AASHTO T48	≥230 °C
3	DSR , 88 °C (shear strain 12%, 10.0 rad/s)	AASHTO T315	$G^*/\sin\delta \geq 1.0$ KPa
4	Elastic Recovery, % , 25 °C	ASTM D6084	≥75%
5	Polymer Separation by Softening point	ASTM D7173	≤4.0 °C
6	Softening Point , °C	ASTM D36	≥65.0 °C
<b>After RTFO Test</b>			
7	Mass Change, 163 °C	AASHTO T240	± 1.0 % Max
8	DSR , 88°C (shear strain 12%, 10.0 rad/s)	AASHTO T315	$G^*/\sin\delta \geq 2.2$ Kpa
9	MSCR, 82 °C	AASHTO T350	$Jnr3.2 \leq 0.5$ KPa-1 , Jnr Diff ≤75% “E” Extremely Heavy Traffic
<b>After PAV Test</b>			
10	Pressure aging vessel (PAV) aging temperature. °C	AASHTO R 28	110
11	DSR , 37 °C (shear strain 1%, 10.0 rad/s)	AASHTO T315	$G^*.\sin\delta \leq 5000$ KPa
12	BBR , -12°C	AASHTO T313	$S \leq 300$ MPa m-value ≥0.3