

BP Performance Grade PG+ Asphalt Binders Type B



The PG+ formulations for BP Performance Grade - Type B Asphalt Binders contain elastomeric modifiers and are designed to meet state specifications for the most demanding paving requirements. These binders are also suitable as the base stock for producing emulsions and cutbacks.

Technical
Datasheet



Quality Assurance

BP Type B Performance Graded Asphalt Binders are supplied by BP to a quality system conforming to AASHTO R 26-01. These binders also meet the DOT quality assurance certifications in Indiana, Illinois, Michigan, Wisconsin and Iowa.

Specifications

BP Type B PG+ Binders are produced to meet the AASHTO M 320 specifications and state PG+ specifications.

Availability

BP Type B PG+ Binders are available by tanker truck.

Recommended Storage, Handling and Usage

BP recommends that all storage tanks be clearly identified and a record maintained for each tank showing grade, volume, date received and source of the asphalt.

Daily, one quart samples of each grade used should be retained for six months.

The storage temperature should not exceed 350°F (177°C). Modified asphalt should not be stored more than two days without agitation. If asphalt is stored longer than one week above 300°F (149°C), it is advisable to monitor aging of the asphalt by checking the DSR. If significant changes occur, it is advisable to have the asphalt tested for compliance with PG and PG+ specifications.

Consult with the BP Asphalt Technical Department prior to use of any other additives (such as anti-strip) with these binders.

Typical laboratory mixing and compaction temperatures are available on a separate BP datasheet and are based on a

procedure developed by MTE. Additional information for establishing mixing and compaction temperatures at the project level are also available from the Asphalt Institute: www.asphaltinstitute.org.

Health, Safety and Environment

BP Asphalt Binders should be used in accordance with the recommendations given in the BP Material Safety Data Sheet for Asphalt (MSDS# 0000002913).

Additional information on the "Safe Handling of Hot Asphalt" can be found in Asphalt Institute publication VA-26W.

"Best Management Practices to Minimize Emissions during HMA Construction" can be found in the Asphalt Pavement Environmental Council publication EC 101.

**For specific inquiries contact:
Technical Support, (630) 420-5345**

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Specifications

PG+ Grade	AASHTO Method	Specified Limit(s) or Test Temperature, °C					
		PG 58-34 P	PG 64-28 P	PG 70-28 P	PG 76-28 P	PG 70-22 P	PG 76-22 P
Original Binder							
Flash Point, COC, °C	T 48	≥ 230					
Rotational Viscosity @ 135°C, Pa·s	T 316	≤ 3.00					
Dynamic Shear @ Grade Temperature, °C G*/sin Δ @ 10 rad/sec, kPa Maximum Phase Angle ° (Wl)	T 315	58	64	70	76	70	76
		≥ 1.00					
		75.0	77.0	75.0	73.0	77.0	75.0
Separation of Polymer (delta SP), °C	ASTM D5892 T53 (ILDOT Procedure)	≤ 2.00					
Force Ratio (4°C; 50mm/min; 300 mm), (f ₂ /f ₁)	T 300	≥ 0.30		≥ 0.35	≥ 0.30	≥ 0.35	
RTFOT Residue							
	T 240						
Mass Loss, %	T 240	≤ 1.00					
Dynamic Shear @ Grade Temperature, °C G*/sin Δ @ 10 rad/sec, kPa	T 315	58	64	70	76	70	76
		≥ 2.20					
Elastic Recovery % (25 °C @ 100mm elongation, cut immediately)	ASTM D6084 Procedure A (IL) T 301 (MI) T 301 (Wl)	≤ 60		≤ 70	≤ 60	≤ 70	
		≤ 65	≤ 65	≤ 65	≤ 65	≤ 65	≤ 65
PAV Residue (Aging Temperature, °C)							
	R 28	100					
Dynamic Shear @ Grade Temperature, °C G*/sin Δ @ 10 rad/sec, kPa	T 315	16	22	25	28	28	31
		≤ 5000					
Creep Stiffness S, Mpa m-value	T 313 T 313	-24	-18	-18	-18	-12	-12
		≤ 300					
		≤ 0.30					

Typical Data

PG+ Grade		PG 58-34 P	PG 64-28 P	PG 70-28 P	PG 76-28 P	PG 70-22 P	PG 76-22 P
Specific Gravity at 60°F (15.6°C)	T 228	1.024	1.032	1.031	1.030	1.037	1.036
Pounds per Gallon at 60°F (15.6°C)		8.528	8.595	8.586	8.578	8.636	8.628
Laboratory Mixing Temperature, °F	AI Tech Bulletin	275-285	285-305	290-310	295-315	305-320	310-325
Laboratory Compaction Temperature, °F	AI Tech Bulletin	250-260	265-285	275-300	280-305	285-300	290-305

Availability / Shipment Method

PG Grade	PG 58-34P	PG 64-28P	PG 70-28P	PG 76-28P	PG 70-22P	PG 76-22P
Bay City	TT	TT			TT	
South Bend	Not Available			TT		

Regular Availability

Special Request

Key: TT - Tanker Truck RC - Rail Car B - Barge

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