Nuroil Juggi

PMB 76-22

(Polymer Modified Bitumen)

Polymer Modified Bitumen (PMB) 76-22 is a type of asphalt binder modified with polymers to enhance its performance under extreme temperature conditions and heavy traffic loads. The designation "76-22" indicates the temperature range within which this bitumen can effectively perform

Softening Point, Ring & Ball C Min. 75 ASTM D36 Elastic Recovery at 15°C Win. 80 ASTM D6084 Flash Point Cleveland open cup C Min. 230 ASTM D92 Viscosity at 150 °C Pa.s Max. 1.5 ASTM D2171 Complex modulus G*/Sin \(\delta \) at 76°C,25mm Plate, 1mm Gap, at 10rad/s Phase Angle (\(\delta \) Ceparation, Difference in Softening Point C Max. 3 FRAASS Breaking Point C Max. 3 FRAASS Breaking Point C Max22 EN 12593 After Rolling Thin-Film Oven Test (RTFO) Loss on Heating Complex modulus G*/Sin \(\delta \) at 76°C,25mm Plate, 1mm Gap, at 10rad/s Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C Rea-1 Max. 0.5 ASTM D7405 KPa-1 Max. 0.5 ASTM D7405 ASTM D7405 Fressure Aging Vessel Residue (PAV) Complex modulus G*/Sin \(\delta \) at 31°C, 8mm Plate, 2mm Gap, at 10rad/s	CHARACTERISTICS	UNIT	LIMITS	TEST METHODS
Flash Point Cleveland open cup °C Min. 230 ASTM D92 Viscosity at 150 °C Pa.s Max. 1.5 ASTM D2171 Complex modulus G*/Sin \(\tilde{\sigma}\) at 76°C,25mm Plate, 1mm Gap, at 10rad/s Phase Angle (\(\tilde{\delta}\)) Separation, Difference in Softening Point °C Max. 3 FRAASS Breaking Point °C Max22 EN 12593 After Rolling Thin-Film Oven Test (RTFO) Loss on Heating Complex modulus G*/Sin \(\tilde{\delta}\) at 76°C,25mm Plate, 1mm Gap, at 10rad/s Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin \(\tilde{\delta}\) at 31°C, 8mm Max 6000 ASTM D7475	Softening Point, Ring & Ball	°C	Min. 75	ASTM D36
Viscosity at 150 °C Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s Phase Angle (δ) Separation, Difference in Softening Point FRAASS Breaking Point °C Max. 3 FRAASS Breaking Point °C Max22 EN 12593 After Rolling Thin-Film Oven Test (RTFO) Loss on Heating Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C Rea-1 Max. 0.5 ASTM D7405 KPa-1 Max. 0.5 ASTM D7405 Rea-1 Max. 0.5 ASTM D7405 ASTM D7405 Rea-1 Max. 0.5 ASTM D7405 ASTM D7405 ASTM D7405 Rea-1 Max. 0.5 ASTM D7405 ASTM D7405 ASTM D7405 Rea-1 ASTM D7405 ASTM D7405 ASTM D7405 ASTM D7405 Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm ASTM D7475	Elastic Recovery at 15°C	%	Min. 80	ASTM D6084
Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s Phase Angle (δ) degrees (°) max. 75 ASTM D7175 Separation, Difference in Softening Point °C Max. 3 - FRAASS Breaking Point °C Max22 EN 12593 After Rolling Thin-Film Oven Test (RTFO) Loss on Heating %Wt Max. 1.0 ASTM D6 Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s kPa Min. 2.2 ASTM D7175 Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 4.5 ASTM D7405 b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 2.0 ASTM D7405 C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 1.0 ASTM D7405 d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 0.5 ASTM D7405 Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm kPa Max. 6000 ASTM D7475	Flash Point Cleveland open cup	°C	Min. 230	ASTM D92
Plate, 1mm Gap, at 10rad/s Phase Angle (δ) Separation, Difference in Softening Point C Max. 3 FRAASS Breaking Point C Max22 EN 12593 After Rolling Thin-Film Oven Test (RTFO) Loss on Heating Complex modulus G*/Sin δ at 76°C,25mm Plate, 1mm Gap, at 10rad/s Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C Rea-1 Max. 1.0 ASTM D7405 Rea-1 Max. 0.5 ASTM D7405 ASTM D7405 Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm	Viscosity at 150 °C	Pa.s	Max. 1.5	ASTM D2171
Separation, Difference in Softening Point °C Max. 3 - FRAASS Breaking Point® °C Max22 EN 12593 After Rolling Thin-Film Oven Test (RTFO) Loss on Heating %Wt Max. 1.0 ASTM D6 Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s	•	kPa	Min. 1.0	ASTM D7175
FRAASS Breaking Point ^a After Rolling Thin-Film Oven Test (RTFO) Loss on Heating Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C Resource Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm Rea Max 6000 ASTM D7175	Phase Angle (δ)	degrees (°)	max. 75	ASTM D7175
After Rolling Thin-Film Oven Test (RTFO) Loss on Heating %Wt Max. 1.0 ASTM D6 Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s kPa Min. 2.2 ASTM D7175 Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 4.5 ASTM D7405 b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 2.0 ASTM D7405 C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 1.0 ASTM D7405 d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 0.5 ASTM D7405 Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm kPa Max 6000 ASTM D7175	Separation, Difference in Softening Point	°C	Max. 3	-
Loss on Heating %Wt Max. 1.0 ASTM D6 Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s kPa Min. 2.2 ASTM D7175 Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 4.5 ASTM D7405 b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 2.0 ASTM D7405 C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 1.0 ASTM D7405 d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 0.5 ASTM D7405 Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm kPa Max 6000 ASTM D7175	FRAASS Breaking Point ^a	°C	Max22	EN 12593
Complex modulus G*/Sin δ at 76°C,25mm Plate,1mm Gap, at 10rad/s	After Rolling Thin-Film Oven Test (RTFO)			
Plate, 1mm Gap, at 10rad/s Multiple Stress Creep Recovery (MSCR) test a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C c) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 1.0 ASTM D7405 kPa-1 Max. 0.5 ASTM D7405 Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm	Loss on Heating	%Wt	Max. 1.0	ASTM D6
a) Standard Traffic (S), Jnr 3.2, Jnr diff Max 75% at 76°C b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 2.0 ASTM D7405 kPa-1 Max. 1.0 ASTM D7405 kPa-1 Max. 1.0 ASTM D7405 kPa-1 Max. 0.5 ASTM D7405 Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm		kPa	Min. 2.2	ASTM D7175
Jnr 3.2, Jnr diff Max 75% at 76°C b) Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C c) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm kPa Max 6000 ASTM D7175	Multiple Stress Creep Recovery (MSCR) test	t		
Jnr 3.2, Jnr diff Max 75% at 76°C C) Very Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C kPa-1 Max. 2.0 ASTM D7405 kPa-1 Max. 0.5 ASTM D7405 ASTM D7405 Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm kPa Max. 6000 ASTM D7175		kPa-1	Max. 4.5	ASTM D7405
Jnr 3.2, Jnr diff Max 75% at 76°C d) Extremely Heavy Traffic (H), Jnr 3.2, Jnr diff Max 75% at 76°C Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm kPa Max 6000 ASTM D7175		kPa-1	Max. 2.0	ASTM D7405
Jnr 3.2, Jnr diff Max 75% at 76°C Pressure Aging Vessel Residue (PAV) Complex modulus G*/Sin δ at 31°C, 8mm kPa Max 6000 ASTM D7175	, ,	kPa-1	Max. 1.0	ASTM D7405
Complex modulus G*/Sin δ at 31°C, 8mm kPa Max 6000 ASTM D7175	, , , , , , , , , , , , , , , , , , , ,	kPa-1	Max. 0.5	ASTM D7405
κΡΑ ΜΑΧΙΜΙΙ ΔΥΙΜΙΙ/1/5	Pressure Aging Vessel Residue (PAV)			
	·	kPa	Max. 6000	ASTM D7175

Notes

a - FRAASS Breaking Point only to be evaluated in case the project site has subzero temp conditions.

Quality:

Certification is conducted through our in-house testing laboratory, and witness testing protocols are available before cargo release. We ensure the quality of bitumen for every delivery by arranging for an international inspector to assess quality.

Application:

PMB 76-22 is a polymer-modified bitumen designed for use in conditions that demand high resistance to extreme heat and cold. It performs well in temperatures ranging from 76°C to -22°C, making it suitable for highways, bridges, airport runways, urban roads, and regions with cold climates. Its polymer modification

Packaging:

New steel drums, reconditioned steel drums or eco-friendly Weatherproof packaging in poly bags and also in Bulk.

Steel Drums: 150Kg, 180Kg, 200Kg

Poly Bags: 300Kg, 1000Kg Bulk: Bitumen Tank Container

Code Approvals/Compliance:

Meets IS 15462:2019

Learn More ☑



PMB 76-22

(Polymer Modified Bitumen)

PRODUCT DATA SHEET

enhances its elasticity, durability, and resistance to deformation and cracking, ensuring long-lasting pavement stability and performance.

Proper storage and handling are crucial for maintaining its quality and ensuring optimal performance.

Health & Safety:

Bitumen is unlikely to present any significant health or safety hazard when properly used in the recommended application, provided good standards of industrial and personal hygiene are maintained. www.nuroil.com

For further information, please contact:

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