

State: Illinois	Materials: Re: Section 1032, Bituminous Materials
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Asphalt Binder											
Revised Section 1032.05 (a)	Highlights	BDE Special Provision for PG Asphalt Binder published Jan 2026 replaced Elastic Recovery with Jnr and %Rec for SBS Modified Binders. Softener-SBS Modified Binders also added to the Specification. Requirements related to SB and SBR modified binders removed									
Section 1032.05 (b)	PMA Notes	Elastomers shall be added to base asphalt. They shall be either SB diblock, or triblock co-polymer without oil extension or an SBR. Smooth, homogeneous and comply with requirements.									
	Exclusions and Limits	Air Blown, REOB, Acid Modification (PPA), Asphalt modification at Mixture Plants.									
Illinois		Table 1: Requirements for Performance-Graded Asphalt Binders (Non-modified) (Note 1)									
Property	Test Method: AASTHO (T, R, PP), ASTM (D)	Requirements by Performance Grade									
		46-34	46-28	52-28	52-34	58-28	58-22	64-28	64-22	70-22	
ORIGINAL											
Flash Point, °C		T48	230 min.								
Rotational Viscosity, Pa·s	135 °C	T316	3 max.								
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec)	At Grade Temperature	T315	1.00 min.								
RTFO RESIDUE		T240									
Mass Change, %		T240	1.00 max.								
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec.)	At Grade Temperature	T315	2.20 min.								
PAV RESIDUE		R28	90 °C, 20 hrs, 300psi				100 °C, 20 hrs, 300 psi				
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.) (Note 2)	At Test Temperature	T315	10 °C	13 °C	16 °C	13 °C	19 °C	22 °C	22 °C	25 °C	28 °C
			5000 max.								
Creep Stiffness, MPa	At Test Temperature	T313	-24 °C	-18 °C	-18 °C	-24 °C	-18 °C	-12 °C	-18 °C	-12 °C	-12 °C
M-Value			300 max.								
PAV Residue (40 hrs.) (Note 3)			90 °C, 40 hrs., 300psi				100 °C, 40 hrs., 300 psi				
Small Strain Parameter BBR, ΔTc	At Test Temperature	PP 113	-5 ° C Min.								
NOTES		<ol style="list-style-type: none"> Specific gravity at 15.6 °C data is required on all bills of lading. If the intermediate temperature stiffness, G* sin(d), is below 5,000kPa, the phase angle minimum limit is not required. If the intermediate temperature stiffness, G* sin (d) is between 5,000 and 6,000 kPa, the intermediate phase angle minimum limit (42°) is required. 40 Hour PAV (40 hours continuous or 2 PAV at 20 hours) 									

To ensure the most accurate and current information, the specific agency should be contacted.



Illinois		Table 2: Requirements for Performance-Graded Asphalt Binders (Modified) (Note 1 & 3)					
Property		Test Method: AASHTO (T), ASTM (D)	Requirements by Performance Grade				
			SBS Modified Binders				
			64-28	70-28	76-28	70-22	76-22
ORIGINAL							
Flash Point, ° C		T 48	230 min.				
Rotational Viscosity, Pa·s	135 °C	T 316	3 max.				
Dynamic Shear, kPa ($G^*/\sin \delta$, 10 rad./sec)	At Grade Temperature	T 315	1.00 min.				
Separation of Polymer (Difference in Softening Point between top and bottom portions)		Note 2	4 °F max				
RTFO RESIDUE		T 240					
Mass Change, %		T 240	1.00 max.				
Dynamic Shear, kPa ($G^*/\sin \delta$, 10 rad./sec.)	At Grade Temperature	T 315	2.20 min.				
Maximum Jnr (3.2 kPa)	At Test Temperature	T 350	58 °C	58 °C	58 °C	64 °C	64 °C
			≤ 2	≤ 1	≤ 0.5	≤ 2	≤ 0.5
Minimum % Recovery (3.2 kPa)	At Test Temperature	T 350	≥ 30%	≥ 60%	≥ 80%	≥ 30%	≥ 75%
PAV RESIDUE		R 28	100 °C, 20 hrs, 300 psi				
Dynamic Shear, kPa ($G^* \cdot \sin \delta$, 10 rad./sec.) (Note 4)	At Test Temperature	T 315	22 °C	25 °C	28 °C	28 °C	31 °C
			6000 max.				
Creep Stiffness, MPa	At Test Temperature	T 313	-18 °C	-18 °C	-18 °C	-12 °C	-12 °C
			300 max.				
M-Value			0.300 min.				
NOTES		<ol style="list-style-type: none"> Specific gravity at 15.6 °C data is required on all bills of lading. Follow this link for lab procedure regarding Separation of Polymer: http://www.idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Guides-&-Handbooks/Highways/Materials/Bituminous-Chemistry/Separation%20of%20Polymer%20from%20Asphalt%20Binder.pdf Requirements in addition to M320 are shown in red. If the intermediate temperature stiffness $G^*\sin\delta$, is above 5,000 kpa, the intermediate phase angle limit of 42°C is required 					

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Illinois		Table 3: Requirements for Ground Tire Rubber (GTR) Modified Asphalts (Note 1, 4)					
Property		Test Method: AASHTO (T), ASTM (D)	Requirements by Performance Grade				
			GTR Modified				
			64-28	70-22	70-28	76-22	76-28
ORIGINAL							
Flash Point, ° C		T 48	230 min.				
Rotational Viscosity, Pa·s	135 °C	T 316 (Note 2)	3 max.				
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec)	At Grade Temperature	T 315 (Note 3)	1.00 min.				
RTFO RESIDUE		T 240					
Mass Change, %		T 240	1.00 max.				
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec.)	At Grade Temperature	T 315 (Note 3)	2.20 min.				
Elastic Recovery, %	25 °C	D 6084 (Procedure A)	60 min.	70 min.			
PAV RESIDUE		R 28	100 °C, 20 hrs, 300 psi				
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.) (Note 5)	At Test Temperature	T 315	22 °C	28 °C	25 °C	31 °C	28 °C
			6000 max.				
Creep Stiffness, MPa	At Test Temperature	T 313	-18 °C	-12 °C	-18 °C	-12 °C	-18 °C
			300 max.				
M-Value			0.300 min.				
NOTES		<ol style="list-style-type: none"> Specific gravity at 15.6 °C data is required on all bills of lading. GTR Modified Asphalt shall be tested for rotational viscosity according to AASHTO T316 using spindle S27. GTR modified asphalt shall be tested according to AASHTO T315 using a gap of 2 mm. Requirements in addition to M320 are shown in red. If the intermediate temperature stiffness, G* sin(d), is below 5,000kPa, the phase angle minimum limit is not required. If the intermediate temperature stiffness, G* sin (d) is between 5,000 and 6,000 kPa, the intermediate phase angle minimum limit (42°) is required. 					

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Illinois		Table 4: Requirements for Softener Modified Performance-Graded Asphalt Binders (SM) (Note 1,2)									
Property		Test Method: AASTHO (T, R, PP), ASTM (D)	Requirements by Performance Grade								
			46-34	46-28	52-28	52-34	58-28	58-22	64-22		
ORIGINAL											
Flash Point, °C		T48	230 min.								
Rotational Viscosity, Pa·s	135 °C	T316	3 max.								
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec)	At Grade Temperature	T315	1.00 min.								
RTFO RESIDUE		T240									
Mass Change, %		T240	1.00 max.								
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec.)	At Grade Temperature	T315	2.20 min.								
PAV RESIDUE		R28	90 °C, 20 hrs, 300psi				100 °C, 20 hrs, 300 psi				
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.) (Note 3)	At Test Temperature	T315	10 °C	13 °C	16 °C	13 °C	19 °C	22 °C	25 °C		
			6000 max.								
Creep Stiffness, MPa	At Test Temperature	T313	-24 °C	-18 °C	-18 °C	-24 °C	-18 °C	-12 °C	-12 °C		
			300 max.								
M-Value			0.300 min.								
PAV Residue (40 hrs) (Note 4)			90 °C, 40 hrs., 300psi				100 °C, 40 hrs., 300 psi				
Small Strain Parameter, ΔTc	At test temperature	PP 113	-5 °C Min.								
Large Strain Parameter, DSR/LAS Fatigue Property, Δ G* peak τ	At test temperature	Illinois Modified T315	≥ 54%								
NOTES			<ol style="list-style-type: none"> Specific gravity at 15.6 °C data is required on all bills of lading. ATR-FTIR shall be collected for both the softening compound as well as the SM asphalt binder. ATR-FTIR spectra shall be collected on unaged SM binder, 20-hr PAV aged SM binder and 40-hr PAV SM binder. ATR-FTIR shall be collected per Illinois Test Procedure 601 If the intermediate temperature stiffness, G* sin(d), is below 5,000kPa, the phase angle minimum limit is not required. If the intermediate temperature stiffness, G* sin (d) is between 5,000 and 6,000 kPa, the intermediate phase angle minimum limit (42°) is required. 40 Hour PAV (40 hours continuous or 2 PAV at 20 hours) 								

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Illinois		Table 5: Requirements for Polymer/Softener Modified (SBS-SM) Modified Binders (Note 6)					
Property		Test Method: AASTHO (T), ASTM (D)	Requirements by Performance Grade				
			SBS-SM Modified Binders				
			64-28	70-28	76-28	70-22	76-22
ORIGINAL							
Flash Point, °C		T 48	230 min.				
Rotational Viscosity, Pa·s	135 °C	T 316	3 max.				
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec)	At Grade Temperature	T 315	1.00 min.				
Separation of Polymer (Difference in Softening Point between top and bottom portions)		Note 3	4 °F max				
RTFO RESIDUE		T 240					
Mass Change, %		T 240	1.00 max.				
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec.)	At Grade Temperature	T 315	2.20 min.				
Maximum Jnr (3.2 kPa)	At Test Temperature	T 350	58 °C ≤ 2	58 °C ≤ 1	58 °C ≤ 0.5	64 °C ≤ 2	64 °C ≤ 0.5
Minimum % Recovery (3.2 kPa)	At Test Temperature	T 350	≥ 30%	≥ 60%	≥ 80%	≥ 30%	≥ 75%
PAV RESIDUE		R 28	100 °C, 20 hrs, 300 psi				
Dynamic Shear, kPa (G* · sin δ, 10 rad./sec.) (Note 5)	At Test Temperature	T 315	22 °C	25 °C	28 °C	28 °C	31 °C
			6000 max.				
Creep Stiffness, MPa	At Test Temperature	T 313	-18 °C	-18 °C	-18 °C	-12 °C	-12 °C
			300 max.				
M-Value			0.300 min.				
PAV Residue (40 hrs) (Note 6)			100 °C, 40 hrs., 300 psi				
Small Strain Parameter, ΔTc	At test temperature	PP 113	-5 °C Min.				
Large Strain Parameter, DSR/LAS Fatigue Property, Δ G* peak τ	At test temperature	Illinois Modified T 315	≥ 60%				
NOTES		<ol style="list-style-type: none"> Specific gravity at 15.6 °C data is required on all bills of lading. ATR-FTIR shall be collected for both the polymer and softening compound as well as the SBS/SM asphalt binder at the dose required for qualification. ATR-FTIR spectra shall be collected on unaged SM binder, 20-hr PAV aged SM binder and 40-hr PAV SM binder. ATR-FTIR shall be collected per Illinois Test Procedure 601 Follow this link for lab procedure regarding Separation of Polymer: http://www.idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Guides-&-Handbooks/Highways/Materials/Bituminous-Chemistry/Separation%20of%20Polymer%20from%20Asphalt%20Binder.pdf Requirements in addition to M320 are shown in red. If the intermediate temperature stiffness G*·sinδ, is above 5,000 kpa, the intermediate phase angle limit of 42°C is required 40 Hour PAV (40 hours continuous or 2 PAV at 20 hours) 					

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