

Province: Québec	Materials: Performance Graded Asphalt Cement
Date Last Reviewed: 04/13/2021	Web Address: http://www.transports.gouv.qc.ca
Bituminous specialist: Christine Duchesne, M.Sc., chemist	Contact Info: christine.duchesne@transports.gouv.qc.ca

Asphalt Binder		
MTQ Spec. 4101	Description	Performance grade asphalt binder shall conform to the requirements of MTQ 4101 (based on AASHTO M332).
	Exclusions	When Warm Mix and/or Anti-stripping additives are used, Binder is to be tested WITH additives present. When required, Method LC 25-009 is used to confirm anti-stripping quality of the binder and the suffix "HRD" is appended to the class.

Québec			Table 1: Requirements for Performance-Graded Asphalt Binders (Note 6)						
Property			Test Method: AASHTO (T), ASTM (D)	Requirements by Performance Class					
				PG 52n-34	PG 52n-40	PG 58n-28	PG 58n-34	PG 64n-28	PG 64n-34
ORIGINAL									
Flash Point, ° C			D92	230 min.					
Rotational Viscosity, Pa·s	135 °C		T316	3 max.					
Dynamic Shear, kPa (G*/sin δ, 10 rad./sec)	At Grade Temp.		T315	1.00 min.					
Storage Stability, °C			LC 25-003	2 max.					
Ash Content, %			D8078	0.50 max.					
Residual coverage of agg., %			LC 25-009	95 min. ^{Note 1}					
RTFO RESIDUE			T240						
Mass Change, %			T240	1.00 max.			0.80 max.	1.00 max.	
MSCR, Jnr _{3.2} , kPa ⁻¹	n = S	At Grade Temp.	T350	≤ 4.50					
	n = H			≤ 2.00					
	n = V			≤ 1.00					
	n = E			≤ 0.50					
MSCR, Jnr _{diff} , % ^{Note 2}				75 max.					
MSCR, R _{3.2} ^{Note 3}				≥ 29.371Jnr _{3.2} ^{-0.263}					
TABLE 1 CONTINUED ON PAGE 2									

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



Property		Test Method: AASHTO (T), ASTM (D) or other	Requirements by Performance Class					
			PG 52n-34	PG 52n-40	PG 58n-28	PG 58n-34	PG 64n-28	PG 64n-34
RTFO + PAV20 RESIDUE		R28	100 °C ^{Note 4}	100 °C ^{Note 4}	100 °C			
Creep Stiffness, MPa	At Test Temp.	T313	-24 °C	-30 °C	-18 °C	-24 °C	-18 °C	-24 °C
M-Value			300 max.					
Critical Low Temperature, T _b			0.300 min.					
			≤ -34 °C	≤ -40 °C	≤ -28 °C	≤ -34 °C	≤ -28 °C	≤ -34 °C
RTFO + PAV40 RESIDUE		R28 ^{Note 5}	100° C					
Delta Tc (ΔTc)			-	Report	-	Report	-	
NOTES		<div>1. For HRD binders only. Tested with reference aggregate.</div> <div>2. This requirement is not applicable for n=E grades. 55% min for Jnr_{3.2} < 0.10.</div> <div>3. This requirement is not applicable for n=S grades.</div> <div>4. For PG 52S-L and PG 52H-L, PAV at 90 °C.</div> <div>5. 40h PAV is achieved by applying 2 cycles of 20h PAV as per AASHTO R28. The second cycle must be started within 30 minutes of the end of the first cycle.</div> <div>6. Requirements in addition to M332 are shown in red.</div>						

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