

SAE Viscosity Grades for Engine Oils

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All values are critical specifications as defined by ASTM D3244

Note: 1 cP = 1mPa•s; 1 cSt = 1 mm²/s

SAE Viscosity Grade	Low Temperature (°C) Cranking ¹ Viscosity, cP	Low Temperature (°C) Pumping ² Viscosity, cP	Low Shear Rate Kinematic Viscosity ³ , cSt at 100°C		High Shear Rate Viscosity ⁴ , cP at 150°C
	Max	Max with No Yield Stress	Min	Max	Min
0W	6200 at -35	60,000 at -40	3.8	—	—
5W	6600 at -30	60,000 at -35	3.8	—	—
10W	7000 at -25	60,000 at -30	4.1	—	—
15W	7000 at -20	60,000 at -25	5.6	—	—
20W	9500 at -15	60,000 at -20	5.6	—	—
25W	13000 at -10	60,000 at -15	9.3	—	—
20	—		5.6	<9.3	2.6
30	—		9.3	<12.5	2.9
40	—		12.5	<16.3	2.9 ⁵ , 3.7 ⁶
50	—		16.3	<21.9	3.7
60	—		21.9	<26.1	3.7

1. ASTM D5293
2. ASTM D4684. Note that the presence of any yield stress detectable by this method constitutes a failure regardless of viscosity.
3. ASTM D445
4. ASTM D4683, CEC L-36-A-90 (ASTM D4741), or ASTM D5481
5. 0W-40, 5W-40, and 10W-40 grades
6. 15W-40, 20W-40, 25W-40, 40 grades