

BB00.40-P-0211-00A	SAE viscosity grades of engine/gear oils	<b>i</b> (All values are crit. specifications as per ASTM D 3244), 1 cP = 1 mPa s; 1 cSt = 1 mm <sup>2</sup> /s	Sheet 211.0
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**Engine oils - SAE J300, revised May 2004**

(extract translated)

SAE- viscosity classes	Low temperature (°C) Cranking Viscosity (ASTM D 5293) (mPa s)  max.	Low-Temperature (°C) Pumping Viscosity (ASTM D 4684) (mPa s) With no yield stress max.	Low shear rate Kinematic Viscosity (ASTM D 445) (mm <sup>2</sup> /s) at 100 °C		High-Shear-Rate Viscosity (ASTM D 4683, CEC L-36-A-90 (ASTM D 4741), ASTM D 5481) (mPa s) at 150 °C and 10 <sup>6</sup> s <sup>-1</sup> min.
			min.	max.	
0 W	6200 at - 35	60,000 at - 40	3.8	-	-
5 W	6600 at - 30	60,000 at - 35	3.8	-	-
10 W	7000 at - 25	60,000 at - 30	4.1	-	-
15 W	7000 at - 20	60,000 at - 25	5.6	-	-
20 W	9500 at - 15	60,000 at - 20	5.6	-	-
25 W	13,000 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 (0W-40, 5W-40, 10W-40)
40	-	-	12.5	< 16.3	3.7 (15W-40, 20W-40, 25W-40, 40)
50	-	-	16.3	< 21.9	3.7
60	-	-	21.9	< 26.1	3.7

(All values are crit. specifications as per ASTM D 3244)

**Gear oils - except SAE J 306, 1998****Automotive Gear Lubricant Viscosity Classification**

SAE Viscosity Grade	Max. Temperature for Viscosity of 150,000 cP (°C)  Using ASTM D 2983 Additional low-temperature viscosity requirements may be appropriate for fluids intended for use in light-duty synchronized manual transmission	Kinematic viscosity at 100 °C (cSt) Using ASTM D 445	
		min. Limit must also be met after testing in CEC L-45-T-93, Method C (20 hours)	max.
70W	– 55  The precision of ASTM D 2983 has not been established for determinations made at temperatures below – 40 °C. This fact should be taken into consideration in any producer-consumer relationship.	4.1	–
75W	– 40	4.1	–
80W	– 26	7.0	–
85W	– 12	11.0	–
80	–	7.0	< 11.0
85	–	11.0	< 13.5
90	–	13.5	< 24.0
140	–	24.0	< 41.0
250	–	41.0	–