

## General Purpose Viscosity Standards

Most viscosity standards supplied by CANNON are hydrocarbon oils. The lower viscosity standards consist of mineral oil base stocks; the higher viscosity standards are polybutenes. Several of the intermediate viscosity “N” standards are poly alpha olefins.

Nominal or approximate values are listed in the following tables. The first table provides kinematic viscosity values in mm<sup>2</sup>/sec (centistokes). The second table provides dynamic viscosity in millipascal-seconds (centipoise).

Values for viscosity, kinematic viscosity, and density at the temperatures listed below are printed on the bottle label. Viscosity values at other temperatures in the range of 20°C to 100°C (68°F to 212°F) can be supplied for these standards at an additional charge. Unless otherwise noted, viscosity standards are sold in 500 ml (1 pint) bottles. Bulk quantities are available on special order. We invite your inquiries.

Viscosities for all standards sold by Cannon are based on the National Institute of Standards and Technology (NIST) value of 1.0016 mPa•s (cP) for water at 20°C (68°F). All CANNON viscosity standards meet the precision specifications of ASTM D 445/446 and ISO 3104/3105, and are traceable to the NIST. CANNON viscosity standards are manufactured and/or certified in CANNON's ISO 9001:2000 registered and A2LA-accredited laboratory. A2LA has accredited CANNON for technical competence in the field of calibration (certificate number 1262.01). The accreditation includes the determination of kinematic and dynamic viscosity (including that of viscosity standards and customer samples) in accordance with ISO/IEC 17025-1999. All calibrations are based on the master viscometer procedures detailed in ASTM D 2162.

*(a) Also 70 cSt at -40°C (-40°F).*

*(b) Incurs additional shipping charges due to low flash points.*

Viscosity Standard	Approximate Kinematic Viscosity in mm <sup>2</sup> /s (Centistokes)									Saybolt Viscosity		
	20°C 68°F	25°C 77°F	37.78°C 100°F	40°C 104°F	50°C 122°F	60°C 140°F	80°C 176°F	98.89°C 210°F	100°C 212°F	SUS 100°F	SUS 210°F	SFS 122°F
N.4(b)	0.47	0.45	0.41	0.40	-	-	-	-	-	-	-	-
N.8(b)	0.74	0.70	0.61	0.60	-	-	-	-	-	-	-	-
N1.0(b)	1.3	1.2	1.0	0.97	0.91	-	-	-	-	-	-	-
N2	2.9	2.6	2.1	2.0	1.7	-	-	-	-	-	-	-
S3(a)	4.6	4.0	3.0	2.9	2.4	-	1.5	1.2	1.2	-	-	-
N4	6.7	5.8	4.2	4.0	3.2	-	1.9	1.5	1.5	-	-	-
S6	11	8.9	6.0	5.7	4.4	-	2.4	1.8	1.8	-	-	-
N7.5	14	12	8.0	7.5	5.8	-	3.1	2.3	2.3	-	-	-
N10	21	17	11	10	7.3	-	3.5	2.7	2.7	-	-	-
N14	30	25	15	14	10	-	5.0	3.5	3.4	-	-	-



S20	44	34	20	18	13	-	5.6	3.9	3.8	100	-	-
N26	57	46	27	25	18	-	7.9	5.3	5.2	130	-	-
N35	87	66	35	32	21	-	8.5	5.4	5.3	170	-	-
N44	110	86	48	44	30	-	12	7.7	7.5	220	-	-
S60	160	120	60	54	35	-	12	7.7	7.5	280	-	-
N75	200	150	82	75	50	-	19	12	12	380	-	-
N100	330	230	110	97	60	-	19	11	11	500	-	-
N140	400	300	160	140	90	-	31	19	18	720	-	-
S200	660	460	200	180	105	-	30	17	16	930	86	-
N250	770	570	280	250	160	-	51	30	29	1300	140	-
N350	1300	850	350	310	170	-	46	24	23	-	110	-
N415	1400	990	470	415	250	-	77	43	41	-	200	-
S600	2400	1600	600	520	280	-	67	34	33	-	150	130
N750	2600	1900	850	750	440	-	130	68	66	-	-	-
N1000	3400	2400	-	940	550	350	150	-	80	-	-	-
N1400	5100	3600	-	1400	820	510	220	-	120	-	-	-
S2000	8300	5300	1900	1600	800	-	160	75	72	-	361	-
N2500	8400	6000	-	2500	1500	950	430	-	230	-	-	-
N4000	2000 0	1200 0	-	3400	1600	850	290	-	120	-	-	-
N5100	2800 0	1800 0	-	5100	2500	1300	420	-	170	-	-	-
S8000	4100 0	2500 0	8000	6700	3200	-	530	-	240	-	-	-
N10200	5800 0	3600 0	-	10200	4900	2500	775	-	300	-	-	-
N15000	7700 0	4700 0	-	13000	6100	3000	980	-	360	-	-	-
N18000	1030 00	6400 0	-	18000	8500	4300	1320	-	500	-	-	-
S30000	-	7900 0	28000	23000	11000	-	1700	-	630	-	-	-



Viscosity Standard	Approximate Viscosity in mPa•s (Centipoise)								
	20°C 68°F	25°C 77°F	37.78°C 100°F	40°C 104°F	50°C 122°F	60°C 140°F	80°C 176°F	98.89°C 210°F	100°C 212°F
<b>N.4(b)</b>	0.42	0.40	0.35	0.34	-	-	-	-	-
<b>N.8(b)</b>	0.64	0.60	0.52	0.51	-	-	-	-	-
<b>N1.0(b)</b>	0.93	0.86	0.72	0.70	0.62	-	-	-	-
<b>N2</b>	2.2	2.0	1.6	1.5	1.3	-	-	-	-
<b>S3(a)</b>	3.9	3.3	2.5	2.4	1.9	-	1.2	0.9	0.9
<b>N4</b>	5.2	4.5	3.3	3.1	2.5	-	1.4	1.1	1.1
<b>S6</b>	10	8.0	5.3	5.0	3.8	-	2.0	1.5	1.5
<b>N7.5</b>	11	9.5	6.3	5.9	4.5	-	2.4	1.7	1.7
<b>N10</b>	21	16	9.5	8.8	6.3	-	2.9	2.1	2.0
<b>N14</b>	24	20	12	11	8.2	-	3.8	2.7	2.6
<b>S20</b>	37	29	17	15	11	-	4.6	3.0	3.0
<b>N26</b>	47	37	22	20	14	-	6.2	4.1	4.0
<b>N35</b>	75	56	30	27	18	-	7.1	4.5	4.4
<b>N44</b>	92	71	39	36	24	-	9.5	6.0	5.9
<b>S60</b>	140	105	52	47	30	-	10	6.4	6.2
<b>N75</b>	160	125	68	61	41	-	16	9.5	9.2
<b>N100</b>	280	200	95	84	52	-	16	9.5	9.2
<b>N140</b>	340	250	130	120	74	-	25	15	14
<b>S200</b>	580	400	170	150	90	-	26	14	13
<b>N250</b>	650	480	230	210	130	-	41	23	23
<b>N350</b>	1100	750	310	270	150	-	39	20	19
<b>N415</b>	1200	830	390	350	210	-	62	34	33
<b>S600</b>	2100	1400	530	450	240	-	57	29	28
<b>N750</b>	2200	1600	710	620	370	-	100	55	53
<b>N1000</b>	2900	2000	-	800	460	280	120	-	65
<b>N1400</b>	4300	3000	-	1200	680	420	180	-	92



<b>S2000</b>	7300	4700	1700	1400	700	-	140	62	59
<b>N2500</b>	7100	5100	-	2100	1200	780	350	-	180
<b>N4000</b>	1700 0	11000	-	2900	1400	730	250	-	100
<b>N5100</b>	2500 0	16000	-	4500	2100	1100	360	-	140
<b>S8000</b>	3300 0	20000	7000	5900	2800	-	450	-	240
<b>N10200</b>	5200 0	32000	-	9000	4200	2100	660	-	250
<b>N15000</b>	6800 0	41000	-	11000	5400	2600	840	-	320
<b>N18000</b>	9200 0	57000	-	16000	7500	3800	1140	-	420
<b>S30000</b>	-	71000	23000	20000	9300	-	1400	-	540