

## General Purpose Viscosity Reference Standards

### Kinematic mm<sup>2</sup>/s (cSt)

Product Code	20.00°C	25.00°C	37.78°C	40.00°C	50.00°C	60.00°C	80.00°C	98.89°C	100.00°C
	68.00°F	77.00°F	100.00°F	104.00°F	122.00°F	140.00°F	176.00°F	210.00°F	212.00°F
N.4	0.4790	0.4587	0.4128	0.4057	-	-	-	-	-
N.8	0.7608	0.7205	0.6313	0.6179	-	-	-	-	-
N1.0	1.320	1.229	1.038	1.010	0.8995	-	-	-	-
N2	2.906	2.623	2.071	1.994	1.700	-	-	-	-
S3	4.596	4.059	3.058	2.926	2.423	2.047	1.530	1.212	1.197
D5	6.569	5.683	4.100	3.894	3.144	2.599	1.877	1.454	1.433
S6	10.59	8.945	6.113	5.761	4.500	3.618	2.502	1.880	1.852
D10	14.82	12.30	8.100	7.586	5.792	4.568	3.064	2.253	2.216
N10	20.99	17.09	10.77	10.03	7.449	5.746	3.722	2.671	2.624
N14	30.30	24.46	15.12	14.03	10.28	7.812	4.939	3.477	3.413
S20	43.32	33.89	19.63	18.02	12.70	9.360	5.645	3.854	3.774
N35	85.26	64.98	35.31	32.12	21.67	15.38	8.713	5.683	5.557
S60	158.2	117.4	59.95	53.96	34.94	23.89	12.73	7.944	7.752
N100	327.6	236.6	113.2	100.9	62.51	41.09	20.51	12.19	11.86
S200	639.5	451.3	204.7	180.8	107.9	68.64	32.38	18.44	17.91
D500	813.3	569.3	252.9	222.7	131.1	82.25	37.94	21.25	20.61
N350	1189	822.0	355.0	311.1	179.3	110.5	49.36	27.00	26.14
N415	1307	945.3	450.1	400.0	244.2	157.3	74.45	41.78	40.52
D1000	1689	1156	486.2	423.9	240.0	145.4	62.96	33.59	32.51
S600	2141	1454	599.5	521.2	291.0	173.9	73.68	38.65	37.36
N1000	4375	2917	1153	994.0	535.8	309.7	123.6	61.72	59.49
S2000	7929	5214	1982	1699	889.6	499.7	188.8	90.27	86.83
D5000	8656	5683	2158	1849	966.7	541.6	204.0	97.22	93.50
D7500	13383	8702	3207	2735	1397	765.5	276.5	127.1	122.0
N4000	17952	11395	3965	3351	1643	865.2	291.5	127.2	121.8
S8000	34390	22088	7883	6684	3319	1767	598.1	258.7	247.8
N15000	70958	44948	15509	13072	6312	3263	1048	430.6	410.3
S30000	128417	80886	27419	23037	10992	5595	1739	691.7	658.2

All values stated are nominal - 28/08/2011

## Dynamic mPa.s (cP)

Product Code	20.00°C 68.00°F	25.00°C 77.00°F	37.78°C 100.00°F	40.00°C 104.00°F	50.00°C 122.00°F	60.00°C 140.00°F	80.00°C 176.00°F	98.89°C 210.00°F	100.00°C 212.00°F
N.4	0.3207	0.3051	0.2697	0.2643	-	-	-	-	-
N.8	0.5526	0.5204	0.4492	0.4385	-	-	-	-	-
N1.0	1.028	0.9525	0.7943	0.7711	0.6798	-	-	-	-
N2	2.345	2.107	1.645	1.580	1.335	-	-	-	-
S3	3.787	3.330	2.482	2.370	1.946	1.630	1.197	0.9319	0.9194
D5	5.507	4.745	3.387	3.211	2.572	2.108	1.497	1.141	1.123
S6	8.954	7.533	5.096	4.794	3.714	2.962	2.015	1.490	1.467
D10	12.55	10.37	6.764	6.323	4.789	3.748	2.473	1.790	1.759
N10	17.88	14.50	9.047	8.412	6.198	4.743	3.024	2.138	2.098
N14	25.37	20.40	12.49	11.57	8.409	6.339	3.944	2.734	2.682
S20	37.16	28.97	16.62	15.23	10.65	7.792	4.627	3.112	3.046
N35	73.11	55.52	29.89	27.14	18.18	12.80	7.145	4.594	4.488
S60	136.3	100.8	50.98	45.81	29.45	19.99	10.49	6.456	6.295
N100	283.6	204.1	96.75	85.11	52.96	34.57	17.01	9.968	9.690
S200	556.0	391.0	175.8	155.0	91.86	58.02	26.99	15.16	14.71
D500	708.2	494.0	217.5	191.2	111.8	69.65	31.68	17.50	16.96
N350	1038	714.8	306.0	267.7	153.2	93.79	41.31	22.30	21.57
N415	1105	796.5	375.8	333.4	202.1	129.3	60.30	33.37	32.34
D1000	1477	1008	420.1	365.7	205.6	123.7	52.84	27.83	26.91
S600	1875	1269	518.6	450.2	249.6	148.2	61.93	32.06	30.96
N1000	3847	2556	1002	862.5	461.9	265.2	104.4	51.47	49.58
S2000	7000	4588	1729	1481	769.9	429.7	160.2	75.65	72.71
D5000	7645	5003	1884	1612	837.2	465.9	173.2	81.51	78.33
D7500	11859	7686	2809	2393	1214	661.2	235.7	107.0	102.6
N4000	15852	10030	3461	2921	1423	744.7	247.6	106.7	102.1
S8000	30593	19588	6935	5872	2898	1533	512.5	219.0	209.6
N15000	63422	40049	13713	11541	5538	2846	902.7	366.6	349.0
S30000	115164	72328	24332	20413	9680	4897	1504	591.2	562.2

All values stated are nominal - 28/08/2011

## Density g/mL

Product Code	20.00°C 68.00°F	25.00°C 77.00°F	37.78°C 100.00°F	40.00°C 104.00°F	50.00°C 122.00°F	60.00°C 140.00°F	80.00°C 176.00°F	98.89°C 210.00°F	100.00°C 212.00°F
N.4	0.6696	0.6651	0.6533	0.6514	-	-	-	-	-
N.8	0.7264	0.7223	0.7116	0.7097	-	-	-	-	-
N1.0	0.7788	0.7750	0.7652	0.7635	0.7558	-	-	-	-
N2	0.8068	0.8032	0.7942	0.7926	0.7855	-	-	-	-
S3	0.8240	0.8205	0.8116	0.8099	0.8030	0.7961	0.7822	0.7689	0.7681
D5	0.8383	0.8349	0.8262	0.8247	0.8180	0.8111	0.7975	0.7847	0.7838
S6	0.8455	0.8421	0.8336	0.8322	0.8254	0.8188	0.8053	0.7927	0.7920
D10	0.8466	0.8434	0.8350	0.8335	0.8269	0.8204	0.8072	0.7947	0.7938
N10	0.8517	0.8484	0.8400	0.8387	0.8321	0.8255	0.8126	0.8003	0.7995
N14	0.8374	0.8341	0.8259	0.8245	0.8180	0.8114	0.7986	0.7863	0.7857
S20	0.8579	0.8548	0.8467	0.8452	0.8388	0.8325	0.8197	0.8076	0.8070
N35	0.8575	0.8544	0.8465	0.8451	0.8388	0.8325	0.8200	0.8084	0.8076
S60	0.8615	0.8584	0.8504	0.8490	0.8428	0.8367	0.8244	0.8127	0.8120
N100	0.8657	0.8626	0.8547	0.8534	0.8473	0.8413	0.8292	0.8177	0.8170
S200	0.8694	0.8664	0.8586	0.8573	0.8513	0.8453	0.8334	0.8221	0.8214
D500	0.8708	0.8678	0.8601	0.8587	0.8527	0.8468	0.8349	0.8237	0.8230
N350	0.8726	0.8696	0.8619	0.8606	0.8546	0.8488	0.8370	0.8259	0.8253
N415	0.8456	0.8426	0.8349	0.8336	0.8277	0.8217	0.8099	0.7988	0.7981
D1000	0.8746	0.8716	0.8640	0.8627	0.8567	0.8509	0.8393	0.8284	0.8277
S600	0.8756	0.8726	0.8651	0.8638	0.8579	0.8522	0.8405	0.8295	0.8288
N1000	0.8793	0.8764	0.8690	0.8677	0.8620	0.8562	0.8448	0.8340	0.8335
S2000	0.8828	0.8799	0.8726	0.8714	0.8655	0.8600	0.8486	0.8380	0.8374
D5000	0.8832	0.8804	0.8731	0.8716	0.8660	0.8603	0.8491	0.8384	0.8378
D7500	0.8861	0.8833	0.8760	0.8749	0.8692	0.8637	0.8524	0.8419	0.8413
N4000	0.8830	0.8802	0.8729	0.8718	0.8661	0.8607	0.8494	0.8389	0.8384
S8000	0.8896	0.8868	0.8797	0.8785	0.8731	0.8675	0.8568	0.8465	0.8459
N15000	0.8938	0.8910	0.8842	0.8829	0.8774	0.8722	0.8614	0.8513	0.8506
S30000	0.8968	0.8942	0.8874	0.8861	0.8806	0.8753	0.8648	0.8547	0.8541

All values stated are nominal - 28/08/2011

**SUS**

Product Code	20.00°C 68.00°F	25.00°C 77.00°F	37.78°C 100.00°F	40.00°C 104.00°F	50.00°C 122.00°F	60.00°C 140.00°F	80.00°C 176.00°F	98.89°C 210.00°F	100.00°C 212.00°F
N.4	-	-	-	-	-	-	-	-	-
N.8	-	-	-	-	-	-	-	-	-
N1.0	-	-	-	-	-	-	-	-	-
N2	-	-	-	-	-	-	-	-	-
S3	-	-	36.10	-	-	-	-	-	-
D5	-	-	-	-	-	-	-	-	-
S6	-	-	45.90	-	-	-	-	-	-
D10	-	-	-	-	-	-	-	-	-
N10	-	-	-	-	-	-	-	-	-
N14	-	-	-	-	-	-	-	-	-
S20	-	-	96.30	-	-	-	-	-	-
N35	-	-	165.4	-	-	-	-	-	-
S60	-	-	279.0	-	-	-	-	-	-
N100	-	-	525.0	-	-	-	-	-	-
S200	-	-	947.0	-	-	-	-	91.90	-
D500	-	-	-	-	-	-	-	-	-
N350	-	-	1645	-	-	-	-	129.0	-
N415	-	-	-	-	-	-	-	-	-
D1000	-	-	-	-	-	-	-	-	-
S600	-	-	-	-	-	-	-	181.8	-
N1000	-	-	-	-	-	-	-	-	-
S2000	-	-	-	-	-	-	-	421.0	-
D5000	-	-	-	-	-	-	-	-	-
D7500	-	-	-	-	-	-	-	-	-
N4000	-	-	-	-	-	-	-	-	-
S8000	-	-	-	-	-	-	-	-	-
N15000	-	-	-	-	-	-	-	-	-
S30000	-	-	-	-	-	-	-	-	-

*All values stated are nominal - 28/08/2011*

**SFS**

Product Code	20.00°C 68.00°F	25.00°C 77.00°F	37.78°C 100.00°F	40.00°C 104.00°F	50.00°C 122.00°F	60.00°C 140.00°F	80.00°C 176.00°F	98.89°C 210.00°F	100.00°C 212.00°F
N.4	-	-	-	-	-	-	-	-	-
N.8	-	-	-	-	-	-	-	-	-
N1.0	-	-	-	-	-	-	-	-	-
N2	-	-	-	-	-	-	-	-	-
S3	-	-	-	-	-	-	-	-	-
D5	-	-	-	-	-	-	-	-	-
S6	-	-	-	-	-	-	-	-	-
D10	-	-	-	-	-	-	-	-	-
N10	-	-	-	-	-	-	-	-	-
N14	-	-	-	-	-	-	-	-	-
S20	-	-	-	-	-	-	-	-	-
N35	-	-	-	-	-	-	-	-	-
S60	-	-	-	-	-	-	-	-	-
N100	-	-	-	-	-	-	-	-	-
S200	-	-	-	-	-	-	-	-	-
D500	-	-	-	-	-	-	-	-	-
N350	-	-	-	-	-	-	-	-	-
N415	-	-	-	-	-	-	-	-	-
D1000	-	-	-	-	-	-	-	-	-
S600	-	-	-	-	137.5	-	-	-	-
N1000	-	-	-	-	253.0	-	-	-	-
S2000	-	-	-	-	420.0	-	-	-	-
D5000	-	-	-	-	-	-	-	-	-
D7500	-	-	-	-	-	-	-	-	-
N4000	-	-	-	-	-	-	-	-	-
S8000	-	-	-	-	-	-	-	-	-
N15000	-	-	-	-	-	-	-	-	-
S30000	-	-	-	-	-	-	-	-	-

*All values stated are nominal - 28/08/2011*