

TYPES OF VISCOUS LIQUIDS

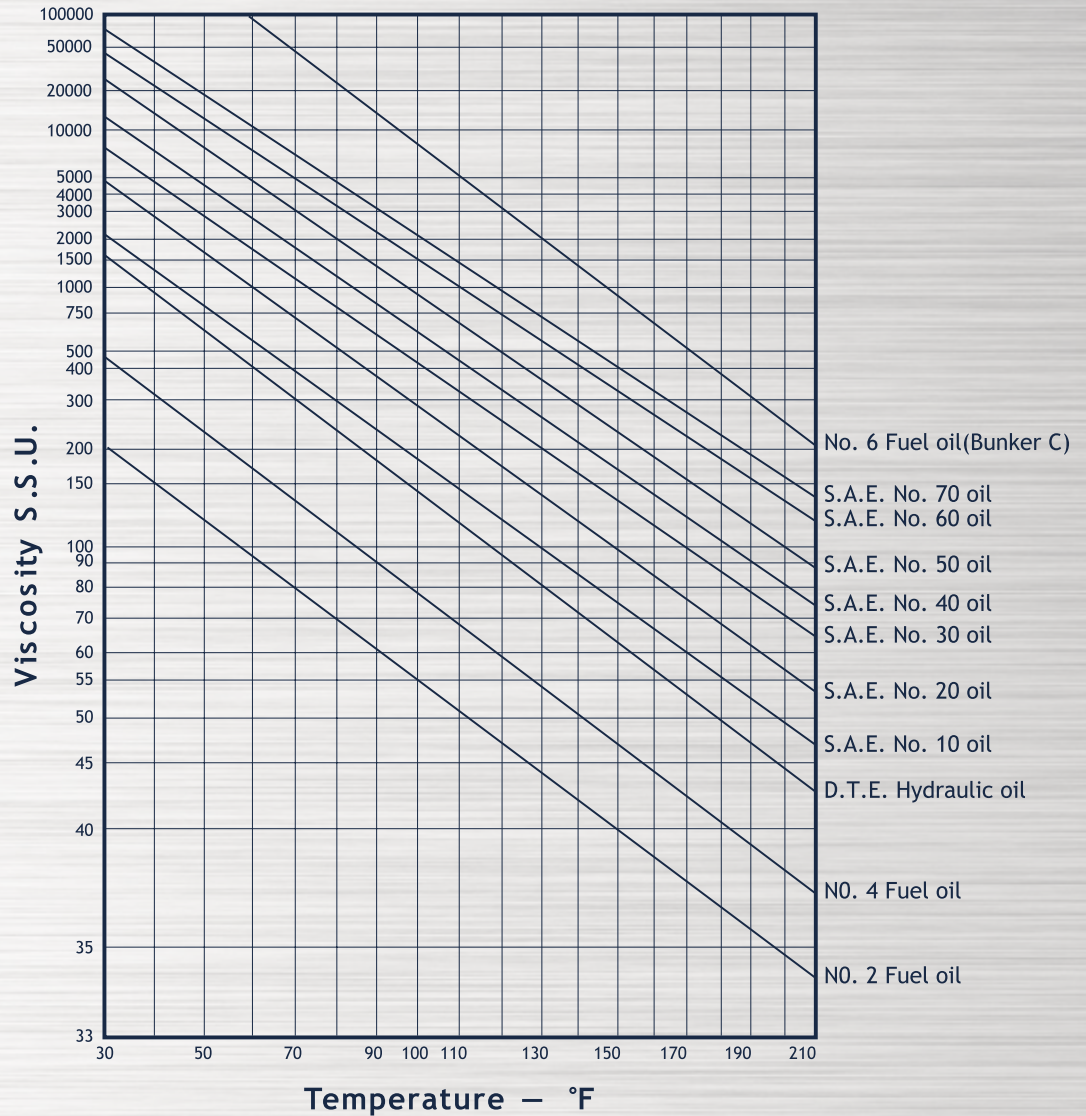
Newtonian Fluids:

Viscosity remains constant with changing shear rates or agitation. The required force to create flow increases proportionally as speed increases (examples: water, mineral oils, syrups, hydrocarbons, resins).

Thixotropic Fluids:

Viscosity decreases as the shear rate increases (examples: paints, inks, caulking compounds, gels, slurry mixes, lotions, shampoo).

Dilatant Fluids: Viscosity increases as the shear rate increases (examples: fluids with high concentration of clays, oxides and granular or crystalline materials).



Saybolt Universal SSU	Stokes	Centi Stokes	Poises	Centi Poises	Engler Seconds	Redwood No. 1 Seconds	Typical Liquids at Room Temperature
31	.010	1.00	.008	.8	54	29	Water
35	.025	2.56	.020	2.05	59	32.1	Kerosene
50	.074	7.40	.059	5.92	80	44.3	No. 2 Fuel Oil
80	.157	15.7	.126	12.6	125	69.2	No. 4 Fuel Oil
100	.202	20.2	.162	16.2	150	85.6	Transformer Oil
200	.432	43.2	.346	34.6	295	170	Hydraulic Oil
300	.654	65.4	.522	52.2	470	254	SAE 10W Oil
500	1.10	110	.88	88.0	760	423	SAE 10 Oil
1,000	2.16	220	1.73	173	1,500	896	SAE 20 Oil
2,000	4.40	440	3.52	352	3,000	1,690	SAE 30 Oil
5,000	10.8	1,080	8.80	880	7,500	4,230	SAE 50 Oil
10,000	21.6	2,160	17.0	1,760	15,000	8,460	SAE 60-70 Oil
50,000	108	10,800	88	8,800	75,000	43,660	Molasses B
100,000	216	21,600	173	17,300	150,000	88,160	Molasses C