

Fluid Viscosity



Typical fluid viscosities are listed below. Values for many common organic and inorganic fluids can be found in other references. The values given for thixotropic fluids are effective viscosities at normal pumping shear rates. Effective viscosity can vary greatly with changes in solids content, concentration, etc. Waukesha will test your fluid if necessary to determine effective viscosity.

Viscous Behavior Type: N — Newtonian T — Thixotropic D — Dilatent

Fluid	Specific Gravity	Viscosity CPS	Viscous Type	Fluid	Specific Gravity	Viscosity CPS	Viscous Type
Reference — Water	1	1.0	N				
	.0						
ADHESIVES				DYES AND INKS			
“Box” Adhesives	1 ±	3,000	T	Ink, Printers	1 to 1.38	10,000	T
PVA	1.3	100	T	Dye	1.1	10	N
Rubber & Solvents	1.0	15,000	N	Gum		5,000	T
BAKERY				FATS AND OILS			
Batter	1.	2,200	T	Corn Oil	0.92	30	N
Butter, Melted	0.98	18 @ 140°F	N	Lard	0.96	60 @ 100°F	N
Egg, Whole	0.5	60 @ 50°F	N	Linseed Oil	0.93	30 @ 100°F	N
Emulsifier		20	T	Peanut Oil	0.92	42 @ 100°F	N
Frosting	1.	10,000	T	Soybean Oil	0.95	36 @ 100°F	N
Lecithin		3,250 @ 125°F	T	Vegetable Oil	0.92	3 @ 300°F	N
77% Sweetened Condensed Milk	1.3	10,000 @ 77°F	N	FOODS, MISC			
Yeast Slurry 15%	1.	180	T	Black Bean Paste		10,000	T
BEER, WINE				Cream Style Corn		130 @ 190°F	T
Beer	1.0	1.1 @ 40°F	N	Catsup	1.11	560 @ 145°F	T
Brewers Concentrated Yeast — 80% Solids		16,000 @ 40°F	T	Pabulum		4,500	T
Wort				Pear Pulp		4,000 @ 160°F	T
Wine	1.0			Potato — Mashed	1.0	20,000	T
CONFECTIONERY				Potato Skins & Caustic		20,000 @ 100°F	T
Caramel	1.2	400 @ 140°F		Prune Juice	1.0	60 @ 120°F	T
Chocolate	1.1	17,000 – 120°F	T	Orange Juice Conc.	1.1	5,000 @ 38°F	T
Fudge, Hot	1.1	36,000	T	Tapioca Pudding	0.7	1,000 @ 235°F	T
Toffee	1.2	87,000	T	Mayonnaise	1.0	5,000 @ 75°F	T
COSMETICS, SOAPS				Tomato Paste — 33%	1.14	7,000	T
Face Cream		10,000	T	Honey	1.5	1,500 @ 100°F	
Gel, Hair	1.4	5,000	T	MEAT PRODUCTS			
Shampoo		5,000	T	Animal Fat, Melted	0.9	43 – 100°F	N
Toothpaste		20,000	T	Ground Beef Fat	0.9	11,000 – 60°F	T
Hand Cleaner		2,000	T	Meat Emulsion	1.0	22,000 – 40°F	T
DAIRY				Pet Food	1.0	11,000 – 40°F	T
Cottage Cheese	1.08	225	T	Pork Fat Slurry	1.0	650 – 40°F	T
Cream	1.02	20 @ 40°F	N	MISC CHEMICALS			
Milk	1.03	1.2 @ 60°F	N	Glycols	1.1	35 @ Range	
Cheese, Process		30,000 @ 160°F	T	PAINT			
Yogurt		1,100	T	Auto Paint, Metallic		220	T
DETERGENTS				Solvents	0.8–0.9	0.5 to 10	N
Detergent Concentrate		10	N	Titanium Dioxide Slurry		10,000	T
				Varnish	1.06	140 @ 100°F	
				Turpentine	0.86	2 @ 60°F	

Fluid	Specific Gravity	Viscosity CPS	Viscous Type
PAPER & TEXTILE			
Black Liquor Tar		2,000 @ 300°F	
Paper Coating 35%		400	
Sulfide 6%		1,600	
Black Liquor	1.3	1,100 @ 122°F	
Black Liquor Soap		7,000 @ 122°F	
PETROLEUM AND PETRO-PRODUCTS			
Asphalt — Unblended	1.3	500 to 2,500	
Gasoline	0.7	0.8 @ 60°F	N
Kerosene	0.8	3. @ 68°F	N
Fuel Oil #6	0.9	660 @ 122°F	N
Auto Lube Oil SAE 40	0.9	200 @ 100°F	N
Auto Trans Oil SAE 90	0.9	320 @ 100°F	N
Propane	0.46	0.2 @ 100°F	N
Tars	1.2	Wide Range	
PHARMACEUTICALS			
Castor Oil	0.96	350	N
Cough Syrup	1.0	190	N
“Stomach” Remedy		1,500	T
Slurries			
Pill Pastes		5,000 ±	T
PLASTICS, RESINS			
Butadiene	0.94	0.17 @ 40°F	
Polyester Resin (Typ)	1.4	3,000	T
PVA Resin (Typ)	1.3	65,000	
STARCHES, GUMS			
Corn Starch Sol 22°B	1.18	32	T
Corn Starch Sol 25°B	1.21	300	T
SUGAR, SYRUPS, MOLASSES			
Corn Syrup 41 Be	1.39	15,000 @ 60°F	N
Corn Syrup 45 Be	1.45	12,000 @ 130°F	N
Glucose	1.42	10,000 @ 100°F	
Molasses — A	1.42	280 to 5,000 @ 100°F	
B	1.43 to 1.48	1,400 to 13,000 @ 100°F	
C	1.46 to 1.49	2,600 to 5,000 @ 100°F	
Sugar Syrups			
60 Brix	1.29	75 @ 60°F	N
68 Brix	1.34	360 @ 60°F	N
76 Brix	1.39	4,000 @ 60°F	N
WATER & WASTE TREATMENT			
Clarified Sewage Sludge	1.1	2,000 Range	

Viscous Behavior Type:

N — Newtonian

T — Thixotropic

D — Dilatent