

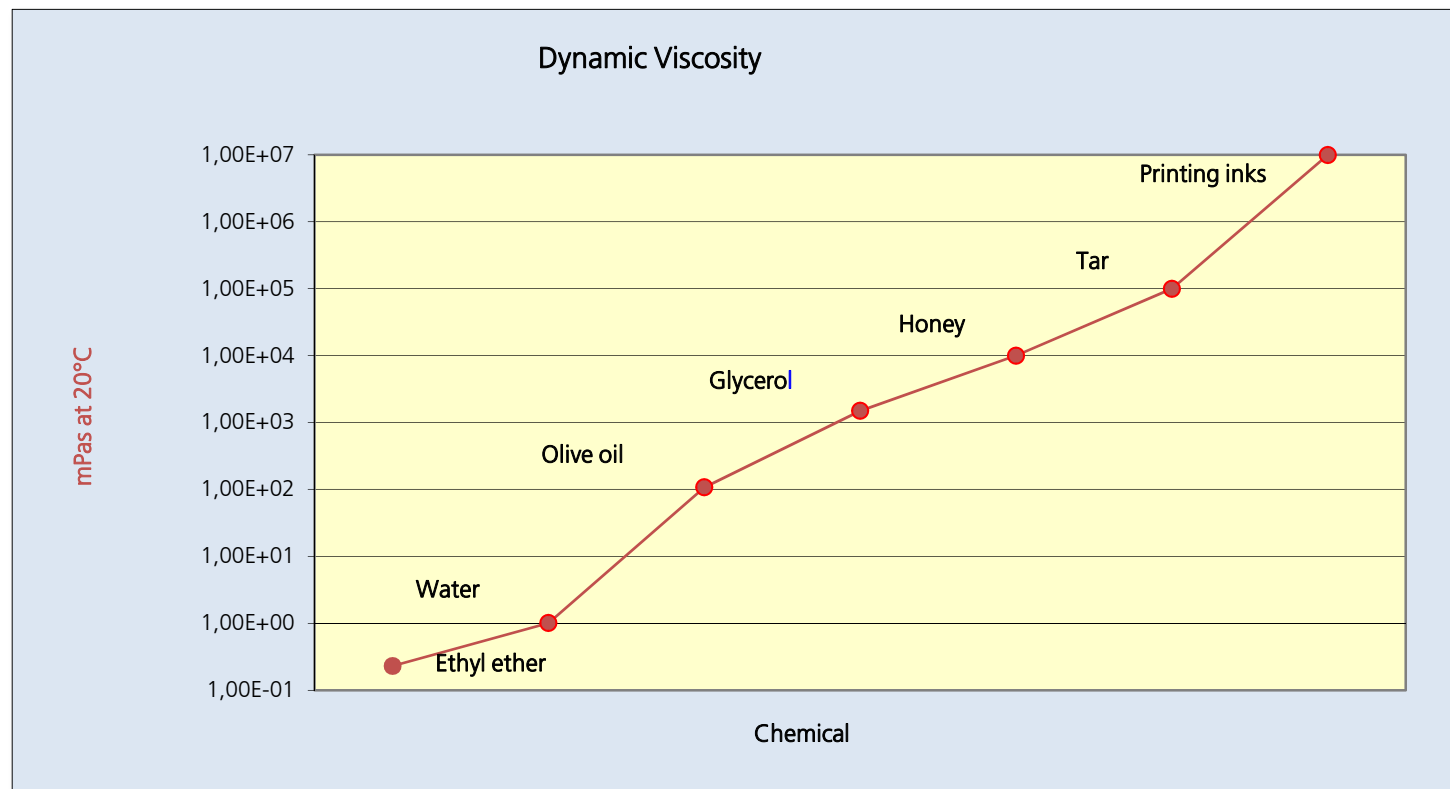
## Viscosity of liquids

The (dynamic) viscosity describes the flow behavior of liquids. It is defined as the internal frictional resistance of a liquid to the application of a pressure or a shearing stress. The dynamic viscosity  $\eta$  (Greek letter eta) is normally given in millipascal-seconds (mPas) and is usually determined by using a rotary viscometer.

Previously the viscosity was given in poises (or centipoises, 1 cP = 1 mPas).

In liquids the viscosity increases as the temperature decreases so that, in addition to the viscosity of the liquid, the temperature at which the viscosity was measured must also be mentioned!

Chemical	mPas at 20°C
Ethyl ether	0,23
Water	1,0087
Olive oil	107,5
Glycerol	1500
Honey	10000
Tar	100000
Printing inks	10000000



Chemicals	Temperature	(dyn.) Viscosity
Alkyd resins	20°C	500-3.000 mPas
Apple puree	20°C	1.500 mPas
Baby food	40°C	1.400 mPas
Bone oil	20°C	300 mPas
Brewer's yeast	20°C	370 mPas
Butter	40°C	30.000 mPas
Butter cream, sour	20°C	550 mPas
Butter fat (ghee)	40°C	45 mPas
Castor oil	20°C	1.000-1.500 mPas
Catchup	30°C	1.000 mPas
Caustic soda 50%	20°C	45 mPas
Chocolate sauce	50°C	280 mPas
Cleaning emulsion	70°C	2.420 mPas
Cocoa butter	60°C	50 mPas
Cocoa mass	20°C	4.000 mPas
Coconut oil	20°C	60 mPas
Cod-liver oil	40°C	35 mPas
Concentrated milk	40°C	80 mPas
Concentrated milk, sugared	20°C	6.100 mPas
Corn oil	60°C	30 mPas
Cotton oil	20°C	60 mPas
Cream (30-50% fat content)	20°C	15-115 mPas
Dipropylene glycol	20°C	107 mPas
Fruit juice	20°C	50 mPas
Fruit juice concentrate	20°C	2.500 mPas
Fruit wort	20°C	600 mPas
Gear oil SAE 140	20°C	2.700 mPas
Gear oil SAE 90	20°C	700 mPas
Gelatine	45°C	1.200 mPas
Glucose	25-30°C	4.300-6.800 mPas
Glycol	20°C	40 mPas
Glyzerol 100%	20°C	1.490 mPas
Glyzerol 100%	10°C	4.500 mPas
Glyzerol 100%	0°C	12.100 mPas
Gravy	80°C	110 mPas
Hand creme	20°C	8.000 mPas
Honey	40°C	2.000 mPas
Hydraulic oil HLP 100	20°C	300 mPas
Hydraulic oil HLP 46	20°C	120 mPas
Hydraulic oil HLP 68	20°C	195 mPas
Jam	20°C	8.500 mPas
Lacquers (25% pigments)	20°C	3.000 mPas
Lard	40°C	65 mPas

Chemicals	Temperature	(dyn.) Viscosity
Latex emulsion	20°C	200 mPas
Linseed oil	40°C	30 mPas
Liqueurs	20°C	10-100 mPas
Liquid egg	45°C	150 mPas
Liquid soap	60°C	85 mPas
Liquid wax	90°C	500 mPas
Lube oil	20°C	60-200 mPas
Machine oil, heavy	20°C	600 mPas
Machine oil, light	20°C	150 mPas
Malt extract	20°C	9.500 mPas
Mayonnaise	20°C	2.000 mPas
Milk	20°C	2 mPas
Molasses 80°Bx	20°C	10.000 mPas
Molasses 83°Bx	20°C	50.000 mPas
Molasses 85°Bx	20°C	100.000 mPas
Motor oil SAE 10	20°C	50 mPas
Motor oil SAE 15	20°C	130 mPas
Motor oil SAE 15W40	20°C	390 mPas
Motor oil SAE 15W40	-15°C	3.000 mPas
Motor oil SAE 5	20°C	30 mPas
Motor oil SAE 50	20°C	750 mPas
Mousse au Chocolat	40°C	1.500 mPas
Oleic acid	20°C	40 mPas
Olive oil	40°C	40 mPas
Palm oil	40°C	45 mPas
Paraffin emulsion	20°C	3.000 mPas
Peanut oil	40°C	40 mPas
Pectin	40°C	300 mPas
Polyester resin	30°C	3.000 mPas
Polymer solution	20°C	20.000 mPas
Polyol (A-component)	10°C	85.000 mPas
Polyol, unpigmented	20°C	500-5.000 mPas
Potassium hydroxide	20°C	67 mPas
Pottage	20°C	430 mPas
Printing inks	40°C	550-2.200 mPas
Pudding	40°C	1.000 mPas
Rape oil	20°C	160 mPas
Resin solution	20°C	7.100 mPas
Salad cream	20°C	1.300-2.600 mPas
Shampoo	20°C	3.000 mPas
Soft cheese	60°C	30.000 mPas
Soya bean oil	20°C	60 mPas
Soya bean oil, treated	20°C	600-800 mPas

<b>Chemicals</b>	<b>Temperature</b>	<b>(dyn.) Viscosity</b>
Starch solution, 25°Bé	20°C	300 mPas
Tomato puree	20°C	195 mPas
Tooth paste	40°C	70.000 mPas
Train oil	20°C	100 mPas
Transformer oil	20°C	30 mPas
Transformer oil	10°C	75 mPas
Treacle 65°Bx	20°C	120 mPas
Treacle 70°Bx	20°C	400 mPas
Turbine oil	20°C	200-1.100 mPas
Vitamine oil	10°C	4.500 mPas
Water varnish	20°C	900 mPas
Whey	40°C	800-1.500 mPas
Yoghourt	40°C	150 mPas

°Bx = °Brix

°Bé = °Baumé