

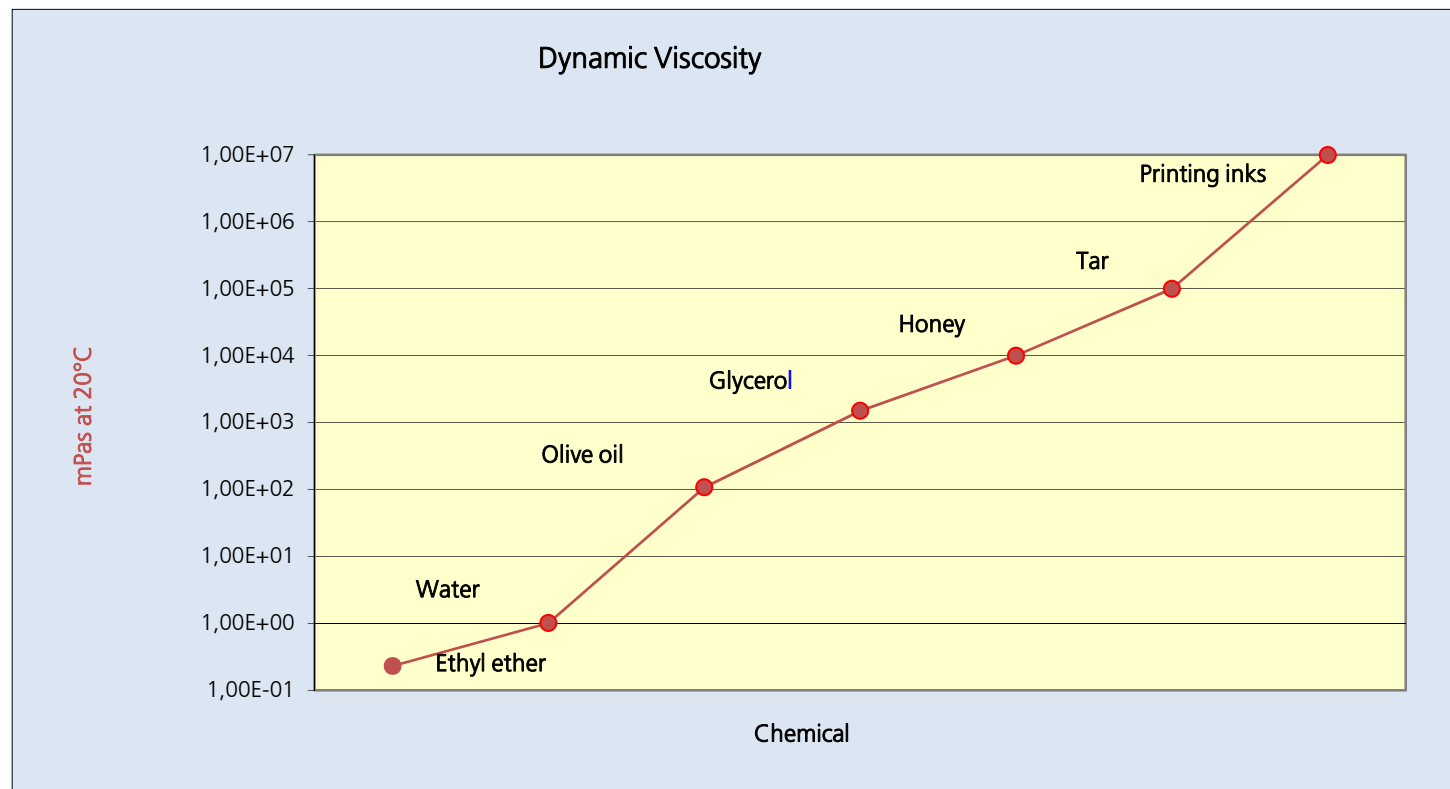
Viscosity of liquids

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 η (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 |

| Chemicals | Temperature | (dyn.) Viscosity |
|------------------------|--------------------|-------------------------|
| Starch solution, 25°Bé | 20°C | 300 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