

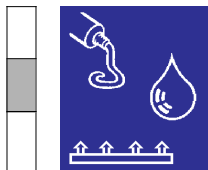
Guide for the use of this product data sheet

Pictorials and adjacent rankings symbolize product characteristics and simplify a preliminary choice of the best products for your application.

The rankings on this page reflect examples of the following:

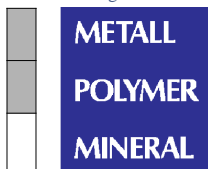
Oil for metals and polymers, suitable at high and low temperatures, high bearing load, low sliding speed, very high life time / durability, high viscosity and good wetting characteristics.

Product



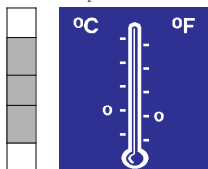
Grease: Made of oil and thickener. The thickener gives grease its consistency (texture).
Oil: A liquid lubricant. The two primary groups are synthetic and non-synthetic lubricants. Oils lower friction and wear in the bearing.
Coating: Protective surface treatment to affect surface properties.

Bearing material



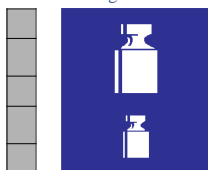
The lubricant must be suitable for the bearing materials. Examples are:
Metal: Steel, aluminum, brass, sinter metal.
Polymer: Thermoplastic, duroplastic, elastomer.
Mineral: Sapphire, ruby, ceramic.

Application temperature



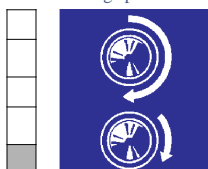
High temperatures reduce a lubricant's life time (expectancy/durability).
At low temperatures oils thicken or may even become solid. A lubricant's range of application temperature depends on its chemical composition.

Bearing load



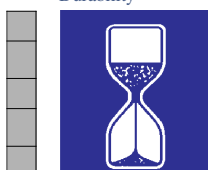
A high bearing load increases wear. High viscosity and the chemical structure of a lubricant can lower wear, as will special wear reducing additives.

Sliding speed



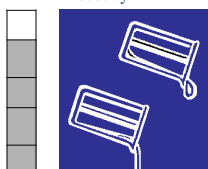
At high speeds, complete separation of bearing surfaces takes place, which lowers wear.
High sliding speed produces inner friction and heat in the lubricant.
Lubricants with lower viscosity are therefore required at high speeds.

Durability



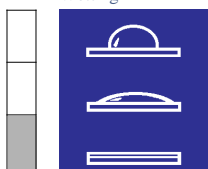
The life time of a lubricant depends on many variables, e.g. bearing temperature, bearing materials, wear and environment.
Synthetic lubricants last longer than non-synthetic ones.

Viscosity



Viscosity refers to the thickness of an oil. High viscosity describes a thick oil (e.g. honey), a low viscosity oil is thin (e.g. water).
High viscosity requires higher torque, but causes less wear.

Wetting



High drop stability comes from high adhesion of an oil. A non-wetting oil forms individual droplets.
Good wetting means that the whole surface is covered by a continuous film.
Both characteristics can be desirable.

