ELBESIL-ÖLE IB

ELBESIL OILS IB are polydimethylsiloxanes (PDMS), which are supplied in viscosity settings from 100 to 1000 cSt. They are water-clear liquids that are largely odourless and tasteless.

Due to the unique combination of outstanding properties, ELBESIL OILS IB are suitable for a wide range of industrial applications. The most important properties are

- Distinctive water-repellent properties
- Low temperature dependence of viscosity
- Heat and cold resistance
- Pronounced surface activity
- High interfacial tension against water and organic polymers
- Good dielectric properties over a wide temperature and frequency range
- High compressibility
- Chemical and physiological indifference

This results in the following typical areas of application:

Release agent:	Demoulding of rubber and plastic parts, one thin application enables many release processes. No build-up in the moulds.
Lubricants:	Plastics, rubber, printed products / paper webs, foams, plastic bearings, cutting tools, sewing thread are given excellent sliding properties and become water-repellent at the same time.
Antifoam:	Mineral and vegetable oils, as well as many non-aqueous systems, are defoamed with extremely low additives.
Polishes:	Car and furniture polishes, shoe and floor care products become water-repellent and are given a smooth and shiny film.
Cosmetics:	In hand creams, sun tanning products, hairspray, and other formulations, a protective, non-greasy film is created that is resistant to aqueous media without hindering skin respiration.
Hydraulic oils:	Shock absorbers, pumps, brake cylinders, stability against shear stress, high compressibility.

Properties

These values are not intended for inclusion in material specifications.

Tabelle I

Viscosity[2] at 25°C, mm²/s	Flash Point[3] t[3] (DIN 51376) in °C	Drop Point4 In °C	Density[5] at 25°C g/cm³	Viscosity-Temperature Coefficient[6]	Expansion Coefficient (cm³/cm³∗°C)∗10^{-4}
100	> 275	<-55	0,963	0,59	9,4
200	> 300	<-50	0,966	0,595	9,35
350	> 300	<-50	0,968	0,595	9,25
1.000	> 320	<-50	0,97	0,60	9,2

Tabelle II

Viskosität[2] bei 25°C, mm²/s	Brechungs-index bei 25°C[7]	Oberflächen-spannung bei 25°C, mN/m	Wärmeleit-fähigkeit bei 50°C W/m·K
100	1,4030	20,9	0,1548
200	1,4030	21,0	0,1548
350	1,4035	21,1	0,1590
1.000	1,4035	21,2	0,1590

[2] according to ASTM-D-445, Annex C.
[3] in open crucible according to ASTM-D-92.
[4] according to ASTM-D-97-39
[5] according to ASTM-D-1298.
[7] according to ASTM-D-1218.
[6] Viscosity-temperature coefficient: 1-Viscosity at 99°C / Viskosity at 38°C

Solvents for all types are aromatic and aliphatic hydrocarbons, chlorinated hydrocarbons, ethers, esters, higher alcohols, ketones.

ELBESIL OILS IB are chemically inert substances. They have no effect on metals such as iron, copper, tin, aluminium, chromium, nickel, etc. They are not attacked by weak acids or alkalis. However, decomposition is caused by concentrated acids (sulphuric and nitric acid), aggressive gases (chlorine) or concentrated alkalis - especially when exposed to heat.

Storage stability

ELBESIL OILS B have an unlimited shelf life if stored properly. They are insensitive to climatic influences such as temperature and solar radiation.
We guarantee a shelf life of at least 12 months in original sealed containers.

Packaging	Plastic containers á 25 kg net One-way drums á 200 kg net Containers (IBC) á 1000 kg net