



PDMS 5000

PolydimethylSiloxane Polymer

1) Product Description

PDMS 5000 is a non-reactive linear **polydimethylpolysiloxane** (PDMS) having a viscosity of 5000 centipoise (cps).

PDMS 5000 fluids can remain liquid in circumstances that induce polymers to transform into greases, waxes, or solids.

In **PDMS 5000** fluids, the silicone-to-oxygen link is substantially stronger than the carbon-to-carbon bond. The silicones display the following properties as a result of their structure:

- ✦ At high molecular weight, the viscosity is unusually low.
- ✦ Excellent high and low temperature stability
- ✦ They provide exceptional shear stability and slip in mechanically demanding applications.

PDMS 5000 has an exceptional property profile that distinguishes it from organic compounds such as mineral oils.

2) Properties

PDMS 5000 is a clear and colorless liquid.

- Minimal change in physical properties over a broad temperature range
- Excellent water-repellent properties
- Good dielectric properties
- Low surface tension and thus high surface activity
- Chemically highly unreactive
- Low solidifying point
- High flash point
- High heat resistance
- Low flammability
- Soft, smooth skin feel
- Good solubility in a wide range of solvents

3) Technical data

Property	Condition	Value	Method
Appearance	-	colorless, clear	-
Density	25 °C	approx. 0.97 g/cm ³	DIN 51757
Flash point	-	> 300 °C	ISO 2592
Ignition temperature (liquids)	-	410 °C	EN 14522
Refractive index	25 °C	1.403	-
Surface tension	25 °C	approx. 0.021 N/m	-
Viscosity, kinematic	25 °C	Approx. 5000 mm ² /s	DIN 53019

These figures are only intended as a guide and should not be used in preparing specifications.





4) Application

PDMS 5000 has a wide range of applications, no general processing information can be supplied. The parameters will differ depending on the application.

PDMS 5000 is a non-polar liquid that cannot be mixed with polar solvents such as water or short-chain alcohols. **PDMS 5000** is soluble in any proportion in aliphatic and aromatic hydrocarbons, chlorohydrocarbons, ethers, esters, ketones, and higher alcohols. A lab-scale test should be performed before the product is used with solvents for the first time. When using solvents, please remember to read the warning information.

- ✓ Release agent
- ✓ Lubricant
- ✓ Hydraulic Fluid
- ✓ Antifoam agent
- ✓ Water-repellent agent
- ✓ Liquid dielectric for electrical and electronic equipment
- ✓ Heat-transfer oil
- ✓ Polish additive
- ✓ Plastics additive
- ✓ Additive for textile and fiber auxiliaries

5) Packaging and storage

Further information for storage: Store in a dry and cool place.

The "Best use before end date" of each batch is shown on the Certificate of Analysis.

Storage beyond the date specified on the Certificate of Analysis does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

6) Safety notes

For specific information regarding safe handling of this material, please refer to the Safety Data Sheet.

