

PDMS Silicone Fluid

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Linear polydimethylsiloxane fluid, six viscosity grades from 50 to 60,000.

TGI supplies PDMS Silicone Fluid, a linear polydimethylsiloxane (CAS 63148-62-9), as a colorless, transparent fluid in six viscosity grades from 50 to 60,000. The lighter grades, 50 to 1,000, serve as antifoam and defoamer chemistry and as lubricity and wetting additives in drilling, completion and cementing fluids. The heavier grades, 1,000 to 60,000, serve specialty lubrication, release-agent and industrial fluid applications. TGI moves it nationwide and globally.

Grades 50 to 1,000

- Defoamer and antifoam for drilling and completion fluids
- Foam control in cementing and production operations
- Lubricity additive for water-based fluid systems
- Wetting and surface-tension reduction in fluid formulations

Grades 1,000 to 60,000

- Specialty lubrication
- Release agents
- Industrial fluid applications

Key properties

- Chemically stable
- Low surface tension
- Small viscosity change with temperature
- High flash point
- Immiscible with water, soluble in hydrocarbons
- Not classified as hazardous under GHS

Specifications

Sales specification. All grades are a colorless, transparent liquid. Certificate of Analysis available on request.

Grade	Viscosity at 25 C mPa·s (cps)	Density at 25 C g/cm ³	Refractive index at 25 C	Flash point, min C	Volatile matter, max % at 150 C, 3 h
50	45 to 55	0.956 to 0.966	1.4020 to 1.4040	270	1.00
100	95 to 105	0.958 to 0.968	1.4020 to 1.4040	310	1.00
350	330 to 370	0.962 to 0.972	1.4020 to 1.4040	315	1.00
1,000	950 to 1,050	0.965 to 0.975	1.4025 to 1.4045	320	1.00
12,500	11,875 to 13,125	0.968 to 0.978	1.4025 to 1.4045	330	1.00
60,000	57,000 to 63,000	0.970 to 0.980	1.4025 to 1.4045	330	1.00

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Typical properties

Typical values for linear polydimethylsiloxane fluids of these viscosities, from published industry data. They are not specifications and are not tested per lot.

Grade	Pour point, max C	Surface tension at 25 C mN/m	Viscosity-temperature coefficient
50	-50	20.8	0.59
100	-45	20.9	0.60
350	-45	21.1	0.60
1,000	-45	21.2	0.60
12,500	-45	21.3 to 21.5	0.61
60,000	-40	21.3 to 21.5	0.61

Viscosity-temperature coefficient = 1 minus (viscosity at 99 C divided by viscosity at 38 C).

Regulatory and transport

CAS NUMBER	63148-62-9
GHS	Not classified as hazardous.
TRANSPORT	Not regulated as dangerous goods for land, sea or air. No UN number.
TSCA	All components are included on or exempted from listing on the TSCA Inventory.

Storage and shelf life

Twelve months from the date of manufacture in original sealed containers. Store away from oxidizing materials.

Solubility

Soluble in aliphatic and aromatic hydrocarbons. Immiscible with water.

Documents

Safety Data Sheet and lot Certificate of Analysis are available on request.

Intended use

For industrial use. Not tested or represented as suitable for medical, pharmaceutical, food-contact or personal-care applications.

NOTICE

The information in this document is given in good faith and is believed accurate at the date of issue. Truth Global Industries warrants only that the product meets the specifications in effect at the time of shipment. The user is responsible for determining the suitability of the product for the intended application and assumes all risk of that use.