

Silicone Oil

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PCC Silicone oil is a waterclear silicone fluid in a wide viscosity range.

The most important features of this fluid include:

- Little change in physical properties over a wide temperature range.
- The fluid can be used from -40°C to 280°C.
- Excellent water repellency.
- Low surface tension. The fluid readily wets clean surfaces to impart waterrepellency and release characteristics.
- Low toxicity.

Applications

1. As a release agent.
Used purely or as a part of a compounded formula **PCC Silicone oil** provides a non-toxic, non-carbonising mould release for rubber, plastics and metal die-castings.
2. As an Anti-Foam agent.
Very small quantities of the fluid are very effective as a foam control agent, especially in non aqueous systems.
3. As a mechanical fluid.
The very high viscosity-index, the thermal and chemical stability, shear-breakdown resistance and the rubber compatibility as well as the compressibility make this fluid outstanding for mechanical and hydraulic uses.
4. As a lubricant.
The fluid provides excellent lubricating properties for most plastic and elastomeric surfaces. Lubricity with metals depends upon the possible combinations such as P.T.F.E., MoS₂ and other lubricity improvers.
5. In polishes and chemical specialities.
Silicone oil is used in most automobile and furniture polishes for its ease of application, high gloss with a minimum rubbing and durable water repellent film.
6. In electrical and electronic equipment.
Because of the excellent dielectric properties silicone oil is widely used as an insulating and damping fluid.

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Features	Advantages	Benefits
100 % polydimethylsiloxane	No contamination	Improved quality
Insoluble in most petroleum systems	Remains antifoam properties	More output, cost savings
Low surface tension	Low addition levels	Cost savings
Exceptional stability to chemical attack	High antifoam efficiency	Improved product quality
High oxidation resistance	No breakdown under processing conditions	Improved quality
Inertness	Low risk of breakdown	Improved quality
Very low volatility	No processing contamination	Improved quality
High flash point	Remains in heavy residues	Safety in use
Essentially non-toxic	Low flammability	Safe to use
	Low risk	

Storage and shelf life

PCC Silicone oil has an unlimited useful life when stored at ambient temperatures. The product does not freeze and there are no restrictions on storage.

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Characteristics PCC Silicone oil

Viscosity, Cst	Flashpoint, °C	Freezing point, °C	Specific gravity 25°C	Surface tension, mN/m	Refractive index at 25°C
0,65	-4	-67	0,760	15,9	1,375
1	40	-85	0,816	17,4	1,382
5	136	-65	0,910	19,7	1,397
10	162	-65	0,930	20,1	1,399
20	230	-60	0,950	20,6	1,400
50	280	-55	0,959	20,7	1,402
100	>300	-55	0,965	20,9	1,403
300	>300	-50	0,970	21,1	1,403
350	>300	-50	0,970	21,1	1,403
500	>300	-50	0,970	21,1	1,403
1000	>300	-50	0,970	21,2	1,403
5000	>300	-50	0,975	21,4	1,403
10000	>300	-50	0,975	21,5	1,403
12500	>300	-50	0,975	21,5	1,403
30000	>320	-50	0,975	21,5	1,403
60000	>300	-50	0,975	21,5	1,403
100000	>300	-50	0,976	21,5	1,404
300000	>300	-45	0,976	21,5	1,404
500000	>300	-40	0,976	21,5	1,404
1000000	>300	-40	0,976	21,5	1,404