BRB Silicone Oil

BRB Silicone Oil is transparent, inert 100% Polydimethylsiloxane fluid available in a wide range of viscosities. Due to its chemical structure, it has stable characteristics over a wide temperature range and is used in board range of applications.

Application

1. As a release agent.
   Used purely or as a part of a compounded formula *BRB 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., MoS_2 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.

Properties

- 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 water repellency and release characteristics.
- Low toxicity.

Features	Advantages	Benefits
100 % polydimethylsiloxane and not dispersion or solution	No contamination	Improved quality
Insoluble in most petroleum systems	Remains antifoam properties Low addition levels	More output, cost savings
Low surface tension	High antifoam efficiency	Cost savings
Exceptional stability to chemical attack	No breakdown under processing conditions	Improved product quality
High oxidation resistance	Low risk of breakdown	Improved quality
Inertness	No processing contamination	Improved quality
Very low volatility	Remains in heavy residues	Improved quality
High flash point	Low flammability	Safety in use
Essentially non-toxic	Low risk	Safe to use

Typical Data

Viscosity, Cst	Flashpoint, °C COC	Freezing point, °C	Specific gravity, 25 °C	Surface tension, mN/m	Refrac. index at 25 °C
0.65	-4	-67	0.760	15.9	1.375
1	40	-85	0.816	17.4	1.382
2	48	-90	0.830	18.1	1.387
3	62	-100	0.900	18.9	1.392
5	136	-100	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
200	>300	-50	0.970	21.0	1.403
350	>300	-50	0.970	21.1	1.403
500	>300	-50	0.970	21.1	1.403
1,000	>300	-50	0.970	21.2	1.403
5,000	>300	-50	0.975	21.4	1.403
10,000	>300	-50	0.975	21.5	1.403
12,500	>300	-50	0.975	21.5	1.403
30,000	>320	-50	0.975	21.5	1.403
60,000	>300	-50	0.975	21.5	1.403
100,000	>300	-50	0.976	21.5	1.404
300,000	>300	-45	0.976	21.5	1.404
500,000	>300	-40	0.976	21.5	1.404
1,000,000	>300	-40	0.976	21.5	1.404

Shelf life and Storage

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