

BOND-SF-01-13 Dimethyl Silicone Fluids

INDUSTRIAL GRADE

INTRODUCTION

We offers a wide range of silicone fluids in various viscosities that have a combination of properties that give superior performance in a wide variety of applications

APPLICATIONS

Silicone fluids have numerous applications in almost every industry:

- Polishes (High gloss for automobile and furniture)
- Release agent (Plastic/rubber/non-ferrous die casting)
- Liquid Springs and Shock Absorbers
- Heat Transfer
- Power Transmission
- Rust Prevention
- Hydraulic Fluids
- Dielectric Fluids
- Damping
- Water Repellency for aerated cement slabs/bricks
- Paint and Coating Additives
- Lubricants
- Textile Finishing
- Spinneret Cleaner

STORAGE & HANDLING

- It is recommended that normal safety precautions (hand gloves & safety goggles) be taken while handling the product.
- The material should be stored in original containers in a cool place and protected from direct exposure to sunlight.

UNIQUE COMBINATION OF PROPERTIES

The unique chemical structure permits silicone fluids to perform in applications where other fluids are not suitable. Some of the outstanding properties of silicone fluids are:

(1) LOW VISCOSITY / TEMPERATURE COEFFICIENT:

They exhibit a smaller degree of change over a wider temperature range than petroleum oils (over 50 times more constant)

(2) THERMAL STABILITY:

Silicone fluids show excellent stability when exposed to high temperatures. They are stable from -57°C to 200°C for extended periods and can exceed this for short periods.

(3) OXIDATION STABILITY:

The oxidation stability of these fluids is excellent up to 200°C where slugging is eliminated that occurs with mineral oils above 150°C.

(4) CHEMICAL INERTNESS:

They are chemically inert to most common materials.

(5) LOW FLAMMABILITY:

Flash point is in the range of 250°C to 300°C and auto ignition temperature is ranging from 438°C to 460°C.

(6) LOW SURFACE TENSION:

Silicone fluids have unusually low surface tensions that provide easy and efficient spreading, high surface activity and low internal cohesive energies.

(7) SHEAR STABILITY

The shear stability of such fluids can be as much as twenty times that of quality petroleum oils.

(8) DIELECTRIC PROPERTIES:

Electrical grade silicone fluids offer excellent dielectric properties that are maintained for prolonged periods, even under adverse operating conditions.

(9) NON-CORROSIVE:

Silicone fluids contain no acid producing chemicals to cause staining or corrosion.

(10) HIGH COMPRESSABILITY

Silicone fluids are highly compressible and thus more suitable for hydraulic purposes in comparison to hydrocarbon systems.

DESCRIPTION

BOND silicone oil is industrial grade silicone fluid. It is clear, low characteristic odor Dimethyl polysiloxane fluids. The actual viscosity is controlled within + 5% of the desired viscosity. These fluids are manufactured in the viscosity range from 10 cps to 100k cps. In chemical structure Dimethyl silicone fluids are quite different from other fluids having a backbone of silicon-oxygen linkage. The advantage of this is a linkage much stronger than a typical carbon-carbon chain and is more resistant to attack by temperature extremes, oxidation, shear stresses and chemicals than other similar organic fluids and also show good dielectric properties. BOND Silicone fluids are soluble in hydrocarbon solvents, chlorinated hydrocarbon solvents and low molecular weight aromatic solvents. They have limited solubility in alcohols, ethers, acetone and glycols (Solubility here depending on viscosity)

PACKING

General packing is in 1000 kgs HDPE Totes and 200 kgs epoxy coated MS drums. Smaller quantities of 30 kg and 50 kg are available upon request in HDPE carboys.

SHELF LIFE

24 months in the original container.

	BOND-SF-01	BONDSF-02	BOND-SF-03	BOND-SF-04	BOND-SF-05	BOND-SF-06
Appearance	Clear transparent liquid					
Nominal Viscosity at 25°C (cps)	10	20	50	100	200	350
Volatile Weight loss for 1hrs. At 150°C (%)	<6*	<5	<5	<2	<2	<2
Acid Number	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Specific Gravity at 25°C	0.930	0.940	0.945	0.965	0.967	0.967
Refractive Index at 25°C	1.400	1.402	1.405	1.405	1.405	. 1.405
7 Flash Point Open Cup (°C)	>95	>180	>190	>260	>260	>260

	BOND-SF-07	BOND-SF-08	BOND-SF-09	BOND-SF-10	BOND-SF-12	BOND-SF-13
Appearance	Clear transparent liquid					
Nominal Viscosity at 25°C (cps)	1000	5000	10000	12500	60 k	100 k
Volatile Weight loss for 1hrs. At 150°C (%)	<2	<2	<2	<2	<2	<2
Acid Number	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Specific Gravity at 25°C	0.974	0.974	0.976	0.97	0.97	0.973
Refractive Index at 25°C	1.405	1.405	1.405	1.405	1.405	. 1.405
7 Flash Point Open Cup (°C)	>260	>260	>260	>260	>260	>260

* At 70 deg.C

information contain here in is reliable and accurate the best of our knowledge. Technical services will provided for guidance when required. However conditions of uses and methods of application are beyond our control, no warranty is expressed or implied.

ALSO AVAILABLE CONSTRUCTION CHEMICALS LIKE CEMENT ADDITIVES, WATERPROOFING COATINGS,WATER REPPALENTS, CHEMICALS & ABRASION RESISTANCE FLOORINGS MATERIALS, EPOXY-POLYURETHANE RESINS, GOUTING MATERIALS, ANTI CORROSIVE PAINTS, FACADE

PAINTS, SEALANTS AND ADHESIVES, RETRO REINFORCING REHABILITATION MATERIALS. FOR BUILDING, BRIDGE, DAM, CANAL, TUNNEL AND MARINE STRUCTURES, ETC.

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