LK –SIL 100T (10 -100K) Dimethyl Silicone Fluids

INDUSTRIAL GRADE

INTRODUCTION

ELKAY CHEMICALS PVT. LTD. 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

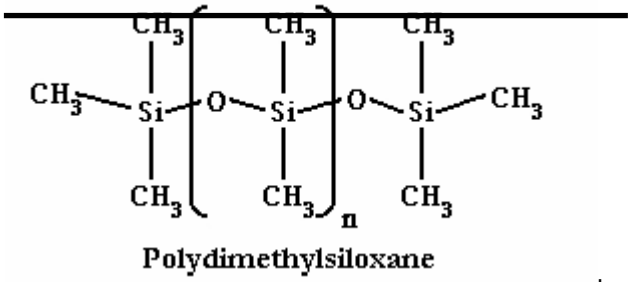
APPLICATIONS

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 ELKAY containers in a cool place and protected from direct exposure to sunlight.



Polydimethylsiloxane

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

LK-SIL 100T it 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 20 cps to 1000k 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**.** LK-SIL 100T 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.

		100T LK-SIL (10)	100T LK-SIL (20)	100T LK-SIL (50)	100T LK-SIL (100)	100T LK-SIL (350)
1	Appearance	Clear transparent liquid				
2	Nominal Viscosity at 25°C (cps)	10	20	50	100	350
3	Volatile Weight loss for 1hrs. At 150°C (%)	<6*	<5	<5	<2	<2
4	Acid Number	<0.20	<0.20	<0.20	<0.20	<0.20
5	Specific Gravity at 25°C	0.930	0.940	0.955	0.965	0.967
6	Refractive Index at 25°C	1.400	1.402	1.405	1.405	1.405
7	Flash Point Open Cup (°C)	≥90	≥180	≥190	≥260	≥260

		100T LK-SIL (1000)	100T LK-SIL (10000)	100T LK-SIL (12500)	100T LK-SIL (60 k)	100T LK-SIL (100 k)
1	Appearance	Clear transparent liquid				
2	Nominal Viscosity at 25°C (cps)	1000	10000	12500	60 k	100 k
3	Volatile Weight loss for 1hrs. At 150°C (%)	<2	<2	<2	<2	<2
4	Acid Number	<0.20	<0.20	<0.20	<0.20	<0.20
5	Specific Gravity at 25°C	0.974	0.976	0.97	0.97	0.973
6	Refractive Index at 25°C	1.405	1.405	1.405	1.405	1.405
7	Flash Point Open Cup (°C)	≥260	≥260	≥260	≥260	≥260

* % at 70 deg.C

[1] Typical Values – Should not be considered as specifications.

The information provided to the customers in this data sheet is intended as a guideline and is provided in good faith. The Information is believed to be accurate. Changes may occur from system to system as methods of use and conditions are beyond our control, hence **users are requested to evaluate the recommendations before actual application to get desired performance.**

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Internal References DX00002