



SYF-990/ SILICONE OIL

FOOD GRADE SILICONE OIL

Product Description

SYF-990/Silicone Oil FG Synthetic Food Grade Silicone Oil, polydimethylsiloxane (PMX) is a range of non-toxic, mineral hydrocarbon free Silicone fluids for use within clean environments. The product is approved by NSF as H1 grade Lubricant. The product meets requirements of USDA H1* 21 CFR. (Registered by NSF (H1) for use where there is potential for incidental contact with food. These Products meet the former guidelines (1998) of the US Department of Agriculture Food Safety and Inspection Service (USDA FSIS) for H1 use (lubricant with incidental food contact). Product contains only substances permitted under US 21 CFR 178.3570, 178.3620 and 182 for use in lubricants with incidental food contact.

SYF-990/Silicon FG,50-1000 centistokes (cSt), are medium viscosity polydimethylsiloxane (PMX) polymers manufactured to yield essentially linear polymers with average kinematic viscosities ranging from 50 to 1000 cSt

SYF-990/Silicon Oil FG is a water clear silicone fluid available in viscosity ranking from 01 centistokes to 20, 00,000 centistokes. Important feature of fluid include: -Little change in physical properties over a wide temperature span a relative flat Viscosity temperature slope and serviceability from -40 to 500^oF (-40 to 315^oC). Excellent water repellency Good dielectric properties over a wide range of temperature and frequencies. Low surface tension-readily wets clean surface to impart water repellency and release characteristics. Low toxicity test has established that SYF-990/Silicon Oil is essentially Non-toxic and non-irritating (although temporary discomfort may result if rubbed into the eye). SILICONE OIL also exhibits heat stability, oxidation resistance, very low than active solvents and is non-greasy, non-acidifying and virtually odorless.

USES: -

It is unique combination of out-standing properties suit SYF-990/Silicon Oil from a variety of application functions as well as a wide range of products and process.

1. AS A RELEASE MATERIAL: -

Used along or as part of a compounded formula, SYF-990/Silicon Oil provides an odorless, non-toxic, non-carbonizing mold release for rubber, plastic & metal die castings.

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2. AS A FOAM PREVENTIVE: -

Extremely small amount of the fluid effectively controls foaming many procession operations, especially in non-adielus systems.

3. AS A MECHANICAL FLUID:

Excellent viscosity-temperature characteristics, thermal and chemical stability shear breakdown resistance, compressibility make SYF990/Silicon Oil FG outstanding for mechanical/hydraulic uses. Typical uses include hydraulic stabilizers, damping mediums.

4. AS A SURFACE-ACTIVE MATERIAL:

Added vinyl plastisol's and liquid springs, SYF-990/Silicon Oil improves the flow characteristics, de-aerates and lubricates the surface of the completed part.

5. AS A LUBRICANT: -

The fluid provides excellent lubrication for plastic and elastomeric surfaces.

6. THE COSMATICS AND SKIN PREPRATIONS: -

It is an important ingredient in hard creams, Protestants sun tan lotions and hair grooming aids because it forms a non-greasy, protective film, which resists water and water borne irritants, yet allows the skin to breath.

7. IN POLISHES AND CHEMICAL SPECIALITIES.

SYF-990/Silicon Oil FG is used in most automobiles and furniture polishes for its case of applications, high gloss with minimum rubbing, and a durable water-repellent film. It is also used in many other specially formulations, including aerosol starches and fabrics conditions.

8. INELECTRICAL / ELECTRONIC EQUIPMENTS: -

With excellent properties, SYF-990/Silicon Oil FG is widely used for both insulating and damping applications. Refer to specific literature on SYF-990/Silicon Oil FG, electrical grade electronic grade.

INFOODPROCESSING:

Non-contaminating and non-adulterating it is suited to many foods processing applications. When considering the fluidforusesinvolvingFDAregulationrefertoliteratureonFood-GradeSILICONEOIL.

9. SOLUBILITY: -

The solubility of SYF-990/Silicon Oil FG varies somewhat according to the viscosity chosen. The low viscosity grades are more completely soluble in a given solvent than are the higher viscosity grades. Since solubility varies, testing is recommended before attempting volume operations. SYF-990/Silicon Oil FG is soluble in Hydro carbon solvent, chlorinated solvent, & low molecular weight aromatic solvent. limited solubility in acetone, alcohol, ethers of glycolFlammabilityandtoxicityshouldalsobeimportantconsiderationsinthechoiceof a solvent.

Typical Properties

SYF-990 Silicone Oil	50cSt	100cSt	200cSt	350cSt	500cSt	650cSt	1000cSt
Appearance	Crystal clear liquid from suspended matter and sediment						
Specific Gravity at 25°C (77°F)	0.960	0.964	0.967	0.968	0.969	0.972	0.970
Refractive Index at 25°C (77°F)	1.4022	1.4030	1.4032	1.4034	1.4034	1.4032	1.4035
Color, APHA	5	5	5	5	5		5
Flash Point, open cup, °C (°F)	318(605)	>326(>620)	>326(>620)	>326(>620)	>326(>620)	315	>326(>620)
Acid Number, BCP	trace	trace	trace	trace	trace	Trace	trace
Melt Point, °C (°F) 2,3	-41(-42)	-28(-18)	-27(-17)	-26(-15)	-26(-15)	-26(15)	-25(-13)
Pour Point, °C(°F)	-70(-94)	-65(-85)	-65(-85)	-65(-85)	-60(-58)	-58(58)	-50(-58)
Surface Tension at 25°C(77°F), dynes/cm	20.8	20.9	21.0	21.1	21.1	21.1	21.2
Volatile Content, at 150°C(302°F), percent	0.30	0.02	0.07	0.09	0.15	0,15	0.11
Viscosity Temperature Coefficient	0.59	0.60	0.60	0.60	0.60	0.62	0.61
Coefficient of Expansion, cc/cc/°C	0.00104	0.00096	0.00096	0.00096	0.00096	0.00096	0.00096
Thermal Conductivity at 50°C(122°F), gcal/cm•sec•°C	-	0.00037	-	0.00038	-	-	0.00038
Specific Heat at 25°C(77°F), cal /g °C	-	0.352	-	0.350	-	0.352	0.349
Solubility Parameter 4	7.3	7.4	7.4	7.4	7.4	7.4	7.4
Solubility in Typical Solvents							
Chlorinated solvents	High	High	High	High	High	High	High
Aromatic solvents	High	High	High	High	High	High	High
Aliphatic solvents	High	High	High	High	High	High	High
Dry alcohols	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Water	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Fluorinated propellants	High	High	High	High	High	High	High
Dielectric Strength at 25°C(77°F), volts/mil	400	400	400	400	400	400	400
Volume Resistivity at 25°C (77°F), ohm-cm	1.0x10¹⁵1.0x10¹⁵1.0x10¹⁵1.0x10¹⁵1.0x10¹⁵1.0x10¹⁵						

Available Pack: 1, 5, 20, 50 and 210ltr.

Shelf Life: 36 Months from manufacturing month.

Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly. The Material Safety Data Sheet (MSDS) are available upon request through our sales office.

*All related specifications meet or exceed.

1. IDENTIFICATION

PRODUCT: - **SYF-990/ SILICON OIL FG Series**

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2. COMPOSITION

Silicone Fluid, Polydimethylsiloxane

3. HAZARDS IDENTIFICATION

Not classified as hazardous.

4. FIRST-AID MEASURES

RESPIRATORY SYSTEM- Remove to fresh air and get medical attention.

INGESTION- Do not induce vomiting.

Wash mouth out with water and obtain

Medical attention.

EYES

Rinse immediately with plenty of water for at least 10 minutes. Get Medical Attention.

SKIN

Remove contaminated clothing. Wash affected area with soap and water, get medical attention.

5. FIRE-FIGHTING METHODS

Foam, carbon dioxide or dry power.

6. ACCIDENTAL RELEASE MEASURES

Contain and absorb in sand or earth. Ensure no material enters drains or water courses. Dispose of as solid waste in accordance with the relevant waste disposal regulations.

7. STORAGE AND HANDLING

Storage

Store in delivery packs in a cool dry place.

HANDLING

At ambient temperatures wear gloves overalls and eye protection. The work area should be adequately ventilated.

No eating drinking or smoking in the work area.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Standard:

The substance with exposure limit is: Notation 1: Exposure

Standard: 2nd substance with exposure limit is: Notation 2:

PERSONAL PROTECTION

Respiratory Protection:

Type of Cartridge (if Applicable): Eye Protection: Safety

Spectacles

Hand Protection: Gloves butyl or nitrile rubber

Industrial Hygiene: No eating drinking or smoking in the work area Ventilation: At room temperature handle in a well-ventilated area. Use exhaust ventilation if exposure to flume or aerosol can occur.

PROTECTION AGAINST FIRE AND EXPLOSION

Combustible but not readily ignited. No explosion hazard.

EC SAFETY PHRASES

Not classified as hazardous.

9. TYPICAL PROPERTIES:

Flash Point °C >326

Pour Point -50 To -70

Specific Gravity @25°C 0.960 To 0.972

Viscosity Temperature Coefficient 0.59 To 0.62

10. STABILITY AND REACTIVITY HAZARDOUS REACTIONS

Comments

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition produces noxious fumes.

11. TOXICOLOGICAL INFORMATION

LD50 Acute Oral Toxicity:> 5000:mg/Kg: Rat LC50 Acute

Inhalation: mg/1:

Eye Irritation: No: Rabbit

Skin Irritation: No.: Rabbit Sensation:

Further Information:

12. ECOLOGICAL INFORMATION

LC50 (96 Hour): mg/1 EC50 (24 Hour): mg/1

Biodegradability (Coupled units):

13. DISPOSAL CONSIDERATIONS

Solid material should be incinerated.

Material absorbed on sand should be disposed of as solid waste.

14. TRANSPORT INFORMATION

IMDG No.: Not classified

Packing Groups: IATA-DGR Class No.: Not classified

TREMCARD: Not classified

RID/ADR Class No.: Not classified

Other Information

15. REGULATORY INFORMATION

Classification and labeling according to

EC Directives 67/54 Not classified as hazardous.

EC Risk Phrases Not classified as hazardous.

Other Hazardous EC Safety Phrases

Not classified as hazardous

16. OTHER INFORMATION: PRODUCT SAFETY

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For safety reasons, it is IMPERATIVE that customer: - Ensure that all those within their control who use the products are Supplied with all relevant information contained within the Material Safety Data Sheet and Technical Bulletin concerning the Applications for which the product is designed and any instructions or warning.

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