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SiSiB SILICONES

A part of SINOPCC group.









SISIB SILICONES

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SISIB SILICONES, a part of SINOPCC group established in 1989, is one of the leading manufacturers in silicone industry, focusing on the development and manufacture of silanes and silicones.

Strategically positioned within the silicone supply chain, SiSiB SILICONES provide a comprehensive range of performance-enhancing products and solutions to meet the need of customers. These include silanes and siliconates, silicone fluids, silicone emulsions, silicone rubber, silicone gum and fumed silica.

Today our products are used successfully throughout the wold in the adhesives and sealants, agriculture, artificial marbles, building protection, coatings & paints, fillers & pigments, foundries, fiber glass, leather & textile, lubricants, personal care, pharmaceuticals, plastics & thermoplastics, polyurethane foam, rubber & tyre, wires & cables.

■ Why select SiSiB SILICONES?

- Strong silane and silicone manufacturing capabilities built over 30+ years history.
- Flexible manufacturing facility able to handle kilograms to thousands of tons per years.
- Rapid and professional process development and scale-up capabilities.
- Offer tailored options while adhering to high quality and safety standards.





Volatile Silicone Fluids

SiSiB Volatile Silicone Fluids (volatile polydimethylsiloxanes) are used as base fluids in a number of personal care products with excellent spreading and unique volatility characteristics. These fluids are clear, tasteless, odorless and provide a non-greasy feel. They are used in a wide variety of antiperspirants, skin creams, skin lotions, suntan lotions, bath oils, hair care products etc. SiSiB Volatile Silicones possess low surface tensions and exhibit excellent spreadability.

SiSiB Volatile Silicones exhibit excellent low temperature serviceability (pour points as low as -86°C. In addition, they provide excellent lubricity and have viscosities comparable to water.

SiSiB® MF2010 (0.65cSt)

Hexamethyldisiloxane [CAS 107-46-0]

SiSiB® MF2010 (1.5cSt)

Decamethyltetrasiloxane [CAS 141-62-8]

SiSiB® MF2010 (1.0cSt)

Octamethyltrisiloxane [CAS 107-51-7]

SiSiB® MF2010 (2~1,000,000cSt)

Polydimethysiloxane [CAS 63148-62-9]



| Product | Viscosity | Flashpoint | Freezing Point | Specific Gravity | Surface Tension | Refractive Index |
|-------------|-----------|------------|----------------|------------------|-----------------|------------------|
| | cSt | °C | °C | 25°C | mN/m, 25°C | 25°C |
| MF2010-0.65 | 0.65 | -4 | -75 | 0.760 | 15.9 | 1.375 |
| MF2010-1 | 1 | 40 | -100 | 0.816 | 17.4 | 1.382 |
| MF2010-1.5 | 1.5 | 63 | -90 | 0.852 | 18.0 | 1.388 |
| MF2010-2 | 2 | 79 | -80 | 0.873 | 18.7 | 1.390 |
| MF2010-3 | 3 | 100 | -70 | 0.898 | 19.2 | 1.393 |

Low Viscosity PDMS Silicone Fluids

SiSiB Low viscosity silicone fluids are 100% polydimethylsiloxanes (CAS# 63148-62-9) that are used in a wide variety of applications. A primary use is as a vehicle or ingredient in a number of personal care products due to their high spreadability, low surface tension and subtle skin lubricity. These fluids are clear, tasteless, odorless and provide a non-greasy feel. They are used in a wide variety of antiperspirants, skin creams, skin lotions, suntan lotions, bath oils, hair care products etc.

SiSiB Low Viscosity Silicones also possess high shearability, high water repellency, low vapor pressure, and low reactivity. They are excellent lubricants for plastics, foams and rubbers.

SiSiB Low Viscosity Silicones exhibit excellent low temperature serviceability. In addition, they provide excellent lubricity and have viscosities slightly thicker than water.

| Product | Viscosity | Flashpoint | Freezing Point | Specific Gravity | Surface Tension | Refractive Index |
|-----------|-----------|------------|----------------|------------------|-----------------|------------------|
| | cSt | °C | °C | 25°C | mN/m, 25°C | 25°C |
| MF2010-5 | 5 | 136 | -65 | 0.910 | 19.7 | 1.397 |
| MF2010-10 | 10 | 162 | -65 | 0.930 | 20.1 | 1.399 |
| MF2010-20 | 20 | >230 | -60 | 0.950 | 20.6 | 1.400 |

Standard Viscosity PDMS Silicone Fluids

SiSiB Standard Viscosity Pure Silicone Fluids are 100% Polydimethylsiloxane (DiMethyl) Silicone oils (CAS 63148-62-9) that are available in viscosities ranging from 50cSt, 100cSt, 200cSt, 350cSt (food grade), 500cSt & 1,000cSt.

They are clear, colorless, odorless and essentially inert. SiSiB Pure Silicone fluids have excellent thermal stability and can be used in open system baths that range from -40°C to 200°C without breaking down (gelling). In closed systems, their thermal stability is even higher. Silicone fluids possess high dielectric properties and are non-conductive.

Polydimethylsiloxanes are used in a wide range of applications that include Damping Fluids, O-Ring Lubricants, Heat Transfer Fluids, High and Low temperature Bath Fluids, Dielectric applications, water-repellency applications and high shear applications.

Standard Viscosity PDMS Silicone Fluids

| Product | Viscosity | Flashpoint | Freezing Point | Specific Gravity | Surface Tension | Refractive Index |
|-------------|-----------|------------|----------------|------------------|-----------------|------------------|
| | cSt | °C | °C | 25°C | mN/m, 25°C | 25°C |
| MF2010-50 | 50 | >280 | -55 | 0.959 | 20.7 | 1.402 |
| MF2010-100 | 100 | >280 | -55 | 0.965 | 20.9 | 1.403 |
| MF2010-200 | 200 | >300 | -50 | 0.967 | 21.0 | 1.403 |
| MF2010-250 | 250 | >300 | -50 | 0.970 | 21.1 | 1.403 |
| MF2010-350 | 350 | >300 | -50 | 0.970 | 21.1 | 1.403 |
| MF2010-500 | 500 | >300 | -50 | 0.970 | 21.1 | 1.403 |
| MF2010-1000 | 1000 | >300 | -50 | 0.970 | 21.2 | 1.403 |

High Viscosity PDMS Silicone Fluids

SiSiB High Viscosity Pure Silicone Fluids are clear, 100% DiMethyl Silicone oils (Polydimethylsiloxanes) that are available in viscosities ranging from 5,000cSt, 10,000cSt, 12,500cSt, 30,000cSt, 60,000cSt, & 100,000cSt. They are used in a wide range of applications that include Damping Fluids, O-Ring Lubricants, Heat Transfer Fluids, and Bath Fluids.

| Product | Viscosity | Flashpoint | Freezing Point | Specific Gravity | Surface Tension | Refractive Index |
|---------------|-----------|------------|----------------|------------------|-----------------|------------------|
| | cSt | °C | °C | 25°C | mN/m, 25°C | 25°C |
| MF2010-5000 | 5000 | >300 | -50 | 0.975 | 21.4 | 1.403 |
| MF2010-10000 | 10000 | >300 | -50 | 0.975 | 21.5 | 1.403 |
| MF2010-12500 | 12500 | >300 | -50 | 0.975 | 21.5 | 1.403 |
| MF2010-30000 | 30000 | >300 | -50 | 0.975 | 21.5 | 1.403 |
| MF2010-60000 | 60000 | >300 | -50 | 0.975 | 21.5 | 1.403 |
| MF2010-100000 | 100000 | >300 | -50 | 0.976 | 21.5 | 1.404 |

Super-High Viscosity PDMS Silicone Fluids

Super-High Viscosity Pure Silicone Fluids are 100% Polydimethylsiloxane (Dimethyl) Silicone oils (CAS # 63148-62-9) that are available in viscosities ranging from 300,000cSt, 600,000cSt, 1 million cSt & 2.5 million cSt. The fluids are clear, colorless, odorless and inert. Their higher viscosity and higher molecular weight make them excellent products for a wide range of Damping applications. SiSiB High Viscosity can also be used as O-Rinq Lubricants, Gasket and Seal lubricants.

| Product | Viscosity | Flashpoint | Freezing Point | Specific Gravity | Surface Tension | Refractive Index |
|----------------|-----------|------------|----------------|------------------|-----------------|------------------|
| | cSt | °C | °C | 25°C | mN/m, 25°C | 25°C |
| MF2010-300000 | 300000 | >300 | -45 | 0.976 | 21.5 | 1.404 |
| MF2010-500000 | 500000 | >300 | -40 | 0.976 | 21.5 | 1.404 |
| MF2010-1000000 | 1000000 | >300 | -40 | 0.976 | 21.5 | 1.404 |



Hydrogen Silicone Fluids

Methyl Hydrogen Silicone Fluid SiSiB® HF2020 [CAS 63148-57-2] CH₃ H₃C Si O Si CH₃ CH₃ CH₃ CH₃ CH₃

Hydrogen Silicone Fluid

SiSiB® HF2050 [CAS 68037-59-2] CH₃ H₃C Si O CH₃ CH₃

Hydrogen Terminated Silicone Fluid

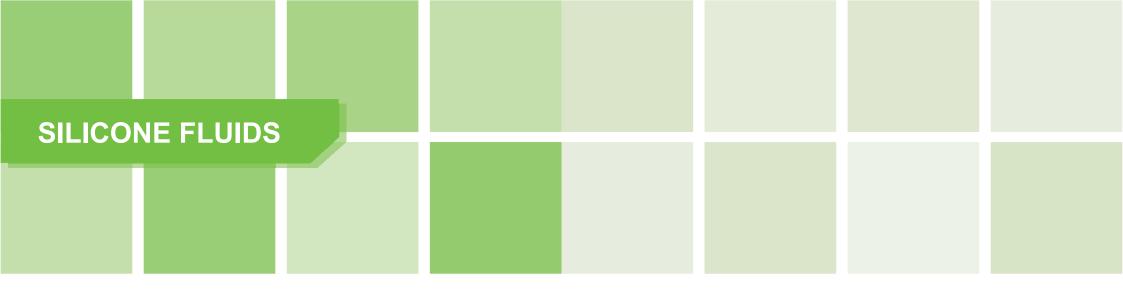
SiSiB® HF2030 [CAS 70900-21-9]

Hydrogen Silicone Fluid

Methyl Hydrogen Silicone Fluid HF2020 contains a hydrogen group on each silicon atom, allowing the fluid to be chemically reactive with hydroxyl groups and unsaturated organic compounds, it is used as waterproofing (hydrophobing) agents for gupsum, textiles, paper and leather, powders, silicas and other fillers.

HF2030 is a reactive silicone fluid terminated with silicon-hydride group, it can be used with vinyl functional silicone polymers to produce cured silicone elastomer. It will react with any vinyl functional silicone polyemer in the presence of catalyst.

HF2050 Crosslinker is a trimethylsilyl capped methyl hydrogen, dimethyl siloxane copolymer, often used as a crosslinker in silicone elastomers where a softer material is desired. HF2030 and HF2500 can provide protection against moisture, dirt, and other environmental contaminants in electrical or electronic encapsulation applications.



Vinyl Silicone Fluids

SiSiB® VF6030 [CAS 68083-19-2]

SISIB® VF6030 vinyl terminated polymers are used in addition cure systems. They can be used as base polymers or as blend polymers in order to create the desired hardness. These polymers can be cured with silicon-hydride crosslinkers and a platinum catalyst. They are available in a variety of viscosities.

| | Vinyl Content | Viscosity cSt |
|---------------|---------------|---------------|
| VF6030-20 | 1.20 mmol/g | 20 |
| VF6030-50 | 0.80 mmol/g | 50 |
| VF6030-100 | 0.37 mmol/g | 100 |
| VF6030-200 | 0.25 mmol/g | 200 |
| VF6030-250 | 0.22 mmol/g | 250 |
| VF6030-400 | 0.19 mmol/g | 400 |
| VF6030-500 | 0.15 mmol/g | 500 |
| VF6030-1000 | 0.11 mmol/g | 1000 |
| VF6030-2000 | 0.08 mmol/g | 2000 |
| VF6030-4000 | 0.07 mmol/g | 4000 |
| VF6030-5000 | 0.06 mmol/g | 5000 |
| VF6030-10000 | 0.05 mmol/g | 10000 |
| VF6030-20000 | 0.04 mmol/g | 20000 |
| VF6030-65000 | 0.03 mmol/g | 65000 |
| VF6030-80000 | 0.024 mmol/g | 80000 |
| VF6030-100000 | 0.020 mmol/g | 100000 |
| VF6030-165000 | 0.015 mmol/g | 165000 |
| | | |

SiSiB® VF6031 (1000cSt)

SiSiB® VF6031 is a mono-vinyl terminated silicone polymer to reduce the durometer of the RTV formulation with minimal bleeding of fluid from the cured material. It may slow the curing of the RTV, but with the use of a faster platinum catalyst, it will help to accelerat the curing.

SiSiB® VF6070 [CAS 67762-94-1] or [CAS 68083-18-1]

Vinyl Silicone Gum SG606X series [CAS 68083-18-1]

vinyl and methyl groups.

Vinyl Silicone Gum SG605X series [CAS 67762-94-1]

SiSiB® VF6070, Vinylmethylsiloxane copolymers and vinyl T-structure fluids are mostly employed in peroxide cure silicones which involve peroxide induced free radical coupling between

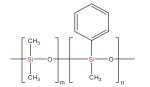
SiSiB® SG605X and SG606X, vinylmethylsiloxane-dimethylsiloxane copolymers of extremely high molecular weights are the typical base polymer for heat cure silicone elastomers. The base polymer are commonly referred to as gums. Gums typically have molecular weights from 500,000 to 900,000 with viscosities exceeding 2,000,000 cSt.

Terpolymer gums containing low levels of phenyl are used in low temperature applications. At increased phenyl concentrations, they are used in high temperature and radiation resistant applications and are typically compounded with stabilizing fillers such as iron oxide. Phenyl groups reduce cross-linking efficiency of peroxide systems and result in rubbers with lower elasticity.



Phenyl Silicone Fluids

Phenyl Methyl Silicone Fluid



SiSiB® PF8704 [CAS 3982-82-9]

1,1,5,5-Tetraphenyl-1,3,3,5-Tetramethyltrisiloxane

Diffusion Pump Fluids

| Product | Viscosity |
|--------------------|-----------|
| SiSiB® PF8250 | 25~40 cSt |
| SiSiB® PF8255-75 | 75 cSt |
| SiSiB® PF8255-100 | 100 cSt |
| SiSiB® PF8255-150 | 150 cSt |
| SiSiB® PF8255-350 | 350 cSt |
| SiSiB® PF8255-750 | 750 cSt |
| SiSiB® PF8255-1000 | 1000 cSt |

SiSiB® PF8705 [CAS 3390-61-2]

1,1,3,5,5-Pentaphenyl-1,3,5-Tetramethyltrisiloxane

Diffusion Pump Fluids

Silanol Silicone Fluids & OH Polymers





Hydroxy (Silanol) Silicone Fluid

SiSiB® OF0035, OF0042, OF0156 [CAS 70131-67-8]

OH Polymer

SiSiB® PF1070 [CAS 70131-67-8]

$$\begin{array}{c|c} CH_3 & CH_3 & CH_3 \\ \hline \\ HO - Si - O - Si - O - Si - OI \\ \hline \\ CH_3 & CH_3 \end{array}$$

SiSiB® OF0035 / OF0042 / OF0156 are low molecular silanol terminated reactive polydimethyl siloxane fluids with terminal hydroxyl groups. SiSiB® OF0035 / OF0042 are used as structure control additives in silicone elastomers.

SiSiB® OF0156 is an important raw material for textile auxiliary industry.

SISIB® PF1070 is intermediate and high viscosity silanol terminated fluids, 750~100,000 cSt. They are recommended for formulating silicone RT V systems that incorporate reinforcing and extending fillers.

| Product | Appearance | Viscosity (25°C) | Volatile (%) |
|---------------------|--------------------|------------------|--------------|
| SiSiB® PF1070-750 | Transparent liquid | 750 cSt | Max. 1.5 |
| SiSiB® PF1070-1500 | Transparent liquid | 1,500 cSt | Max. 1.5 |
| SiSiB® PF1070-2000 | Transparent liquid | 2,000 cSt | Max. 1.5 |
| SiSiB® PF1070-3500 | Transparent liquid | 3,500 cSt | Max. 1.5 |
| SiSiB® PF1070-5000 | Transparent liquid | 5,000 cSt | Max. 1.5 |
| SiSiB® PF1070-10000 | Transparent liquid | 10,000 cSt | Max. 1.5 |
| SiSiB® PF1070-20000 | Transparent liquid | 20,000 cSt | Max. 1.5 |
| SiSiB® PF1070-50000 | Transparent liquid | 50,000 cSt | Max. 1.5 |
| SiSiB® PF1070-80000 | Transparent liquid | 80,000 cSt | Max. 1.5 |
| SiSiB® PF1070-100K | Transparent liquid | 100,000 cSt | Max. 1.5 |
| SiSiB® PF1070-150K | Transparent liquid | 150,000 cSt | Max. 1.5 |
| SiSiB® PF1070-300K | Transparent liquid | 300,000 cSt | Max. 1.5 |
| SiSiB® PF1070-1000K | Transparent liquid | 1,000,000 cSt | Max. 1.5 |



Agricultural Silicone Surfactant (Adjuvant)

| Product | CAS No. | Description | Application | Tank-Mix | In-Can pH range | Spreading | Uptake | Rainfastening | Countertype |
|----------------|-------------|---|--|----------|-----------------|-----------|--------|---------------|-------------|
| SiSiB® ASS8211 | 67674-67-3 | It is a super-spreading surfactant based on polyether modified trisiloxane. It lowers the surface tension of spray solutions, beyond that which is achievable with conventional adjuvants. | High Performance super spreader, EC, SL, WDG | Yes | 6~8 | | ••• | | Silwet 408 |
| SiSiB® ASS8277 | 27306-78-1 | It is a 100% nonionic organosilicone product which has been proven to have effective and poweful wetting capabilities when used in aqueous sprays. | High Performance Super spreader | Yes | 6~8 | | | | Silwet L-77 |
| SiSiB® ASS8806 | 134180-76-0 | It is a superspreading surfactant based on a trisiloxane alkoxylate. It lowers the surface tension of spray solutions, beyond that which is achievable with conventional adjuvants. | Low Foaming Super spreader | Yes | 6~8 | | | •••• | Silwet 806 |
| SiSiB® ASS8309 | 125997-17-3 | It is is a nonionic surfactant that has been specifically designed to enhance the efficacy of pesticides. It is particularly effective when used with water-soluble and post-emergent herbicides. | Super spreader for Organic Farming | Yes | 6~8 | | | | Silwet ECO |
| SiSiB® ASS8560 | 17955-88-3 | It is an alkyl modified trisiloxane, can improve the coverage of oils. It is designed for delivery ofr oil-based pessticide formulations. | Oil based pesticide formulation | Yes | | | | | Silwet 560 |



Siloxane Powder

☐ Siloxane Powder

Siloxane powders (also known as resin modifiers) are 100% active, free-flowing powders available in both non-reactive and organically reactive grades of special ultra high molecular weight siloxane polymers with fumed silica.

| Product | Silicone Content | Carrier | Application |
|---------------|------------------|---------|---|
| SiSiB® SP1050 | 50% | Silica | Thermoplastics |
| SiSiB® SP1070 | 70% | Silica | Thermoplastics |
| SiSiB® SP2060 | 60% | Silica | Thermoplastics |
| SiSiB® SP3060 | 60% | Silica | PVC compounds |
| SiSiB® SP5060 | 60% | Silica | Polyolefin masterbatch, Highly filled masterbatch |

Siloxane Masterbatch



Siloxane Masterbatch

- □ SiSiB Siloxane Masterbatch is pelletized micro-dispersions of special ultra-high molecular weight siloxane polymers. They typically contain 25~50% ultra-high molecular weight siloxane polymers and different plastic carrier resins.
- ☐ Siloxane Masterbatch are produced in solid form for ease of use.
- ☐ The siloxane polymer component of the Siloxane Masterbatch can eliminate blooming as well as migration of fluids and other organic plastic additives, which can occur when using lower molecular weight silicone materials.
- ☐ Easy to handle additives of ultra-high molecular weight siloxane in various thermoplastic resin carriers.

Key Features and Typical Benefits:

- ☐ Improved mar resistance.
- Improved scratch resistance.
- ☐ Improved lubricity.
- □ Non-migrating and non-blooming/non-fogging behavior.
- Improved impact resistance.
- □ Increased fabrication line throughput.
- □ Reduced extruder head pressure.
- ☐ Reduced energy usage in processing. Improve mechanical properties like impact etc.
- Reduced coefficient of friction.
- ☐ Non-halogenated flame retardant additive
- ☐ Improved mold-filling and mold release

| Product | Appearance | Silicone Content | Carrier | Application |
|----------------|---------------|------------------|---------|------------------|
| SiSiB® MB1050 | White Pellets | 50% | LDPE | PE PP PA TPE |
| SiSiB® MB2050 | White Pellets | 50% | EVA | PE PP PA EVA |
| SiSiB® MB3050 | White Pellets | 50% | TPEE | PET PBT |
| SiSiB® MB4050 | White Pellets | 50% | HDPE | HDPE |
| SiSiB® MB5050 | White Pellets | 50% | ABS | ABS AS PC PC/ABS |
| SiSiB® MB6050 | White Pellets | 50% | PP | PP |
| SiSiB® MB7030 | White Pellets | 30% | PA6 | PA |
| SiSiB® MB7040 | White Pellets | 40% | PA6 | PA |
| SiSiB® MB8030 | White Pellets | 30% | PET | PET |
| SiSiB® MB8040 | White Pellets | 40% | PET | PET |
| SiSiB® MB9050 | White Pellets | 50% | TPU | TPU |
| SiSiB® MB10050 | White Pellets | 50% | HIPS | PE, PP |
| SiSiB® MB11050 | White Pellets | 40% | POM | POM |
| SiSiB® MB12050 | White Pellets | 50% | LLDPE | PE, PP |
| SiSiB® MB13025 | White Pellets | 25% | PC | PC, PC/ABS |
| SiSiB® MB15050 | White Pellets | 50% | SAN | PVC, PC, PC/ABS |
| | | | | |