

TFT™ Fluorosilicone (FVMQ)

Teflus® FS Series

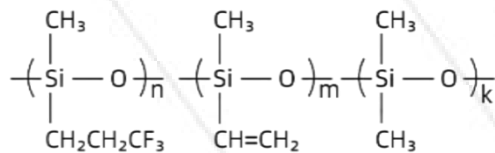
| Teflus® FSG Series (Rubber Gum) | | Teflus® FSB Series (Rubber Base) | |
|--|-------------|--|-------------|
| Type | Teflus® FSG | Type | Teflus® FSB |
| RTV Homopolymer | FSG-R100 | High Tear Strength | FSB-T100 |
| HTV Homopolymer | FSG-H100 | Extrusion | FSB-E100 |
| RTV Copolymer | FSG-R200 | General Purpose | FSB-G100 |
| HTV Copolymer | FSG-H200 | Low Compression | FSB-C200 |
| Ex) Teflus® FSG series (FSG-R110, FSG-H230, ...) | | Ex) Teflus® FSB series (FSB-T130, FSB-C281, ...) | |

| Teflus® FSL Series (Oil) | |
|--|-------------|
| Type | Teflus® FSL |
| Hydroxyl | FSL-100 |
| Methyl | FSL-200 |
| Homopolymer Vinyl | FSL-300 |
| Copolymer Vinyl | FSL-400 |
| Ex) Teflus® FSL series (FSL-110, FSL-420, ...) | |

Fluorosilicone Rubber (FVMQ)

Fluorosilicone rubber (FVMQ) is an elastomer obtained by homopolymerization of tris(trifluoropropyl) trimethylcyclotrisiloxane (abbreviated as D3F) or copolymerization with other silicone monomers. The backbone of fluorosilicone rubber is the same as the common silicone rubber (VMQ) while the side chain of fluorosilicone rubber introduces a trifluoropropyl group, so fluorosilicone rubber perfectly combines the advantages of fluorocarbon rubber (FKM) such as excellent oil resistance and high temperature work ability, and the advantages of silicone rubber (VMQ) such as good softness and outstanding low temperature and high temperature work ability. Fluorosilicone rubber is suitable for applications in low temperature, high temperature, and solvent resistant and oil Fluorosilicone Rubber (FVMQ) resistant environments.

Chemical structure:



Product Features:

- > Easily processed; Easily pigmented.
- > Retaining properties over a wide temperature range of -60°C to 230°C.
- > Good anti-flammability.
- > Suitable to produce rubber compounds of many different durometers, Hardness (Shao A) 20-90.
- > Excellent oil resistance; outstanding apolar solvent resistance.
- > Designed to meet many standards including ASTM, D2000M | L-R-25988, BMS-1-530.

TFT LIMITED fluorosilicone products:

| Product name | Grade | Product Introduction |
|-------------------------|-------------|--|
| Fluorosilicone Raw Gum | Teflus® FSG | It is divided into raw gum for high temperature curing and raw gum for room temperature curing. High temperature curing raw gum is homopolymerized fluorosilicone raw gum Teflus® FSG-H100 and copolymer fluorosilicone raw gum Teflus® FSG-H200; Room temperature curing with raw gum homopolymerfluorosilicone raw gum Teflus® FSG-R100 and copolymer fluorosilicone raw gum Teflus® FSG-R200. |
| Fluorosilicone Compound | Teflus® FSB | It is divided into general purpose Teflus® FSB-G100, low Compression Teflus® FSB-C200; High Tear Strength Teflus® FSB-T100; Extrusion grade Teflus® FSB-E100. |
| Fluorosilicone Oil | Teflus® FSL | Compared with fluorosilicone rubber, it is a fluorosilicone polymer with a lower molecular weight and a viscosity of less than 400Pa.s. Which is including Hydroxyl terminated fluorosilicone oil Teflus® FSL-100, methyl-terminated fluorosilicone oil Teflus® FSL-200, vinylterminated fluorosilicone oil Teflus® FSL-300 and copolymer branched and end group with vinylfluorosilicone oil Teflus® FSL-400. |

Fluorosilicone Rubber (Low Compression) Teflus® FSB-C200

Major Composition:

Fluorosilicone homopolymer raw gum and flumed silica.

Product Features:

- > Good anti-structure property.
- > Excellent oil resistance and outstanding apolar solvent resistance.
- > Retaining properties over a wide temperature range of -60°C to 230°C.
- > Very low compression set.
- > Easily processed and easily pigmented.

Product Performance:

| Property | Test Method | Unit | Technical Standards | | | | | |
|--|-----------------------|-------------------|---|----------|----------|----------|----------|----------|
| | | | FSB-C231 | FSB-C241 | FSB-C251 | FSB-C261 | FSB-C271 | FSB-C281 |
| Appearance | Vision | - | Translucent, smooth, no mechanical impurities | | | | | |
| Gravity | ASTM D792 | g/cm ³ | 1.40 | 1.42 | 1.44 | 1.46 | 1.47 | 1.50 |
| Hardness (Shao A) | ASTM D2240 | - | 30 | 40 | 50 | 60 | 70 | 78 |
| Tensile, Die C | ASTM D412 | MPa | 8.5 | 9.5 | 10 | 10 | 10 | 9 |
| Elongation at Break, Die C | ASTM D412 | % | 480 | 380 | 330 | 290 | 210 | 175 |
| Tear Strength, Die B | ASTM D624 | kN/m | 15 | 16 | 17 | 17 | 18 | 18 |
| Compression Set Post-cured (22 hr/177°C) | ASTM D395 Method B | % | 8 | 7 | 7 | 8 | 8 | 9 |
| Volume Swell in Reference Fuel B (70 hr/ 23°C) | ASTM D471 | % | 20 | 20 | 18 | 18 | 18 | 18 |

* The above data is a typical value, The test procedure is: first refine several times on the open mill, according to 100 parts of mixed rubber, add 1 part Heat-resistant additive (FSB-A-06), 0.55 parts vulcanizing agent (2,5-dimethyl-2, 5-di-tert-butyl peroxide hexane), then molded 15 minutes at 171°C on the molding machine, and post-cured 4 hours at 200°C.

*The customer needs other vulcanization temperatures, and the rubber needs to change the vulcanization system.

*Rubber of different hardness grades can be mixed in any proportion to obtain various hardness within 30 -80.

Product Application:

- > Suitable for applications as sealing materials for petroleum oil, lubricant oil, hydraulic oil, transformer oil, and apolar chemical reagents in low temperature and/ or high temperature environments.
- > Suitable to produce molded, extruded and calendered parts including O-rings, gaskets, fuel-line quick-connect seals, oil seals, sealing strips, diaphragms, membranes, valves, hydraulic and electrical clamp blocks.
- > Widely used in automobile industry, aerospace industry, petroleum chemical industry etc.

Package and Shipment:

- > It is available in 12.5 kg per plastic bag and two bags in one carton.
- > It is shipped as non-dangerous goods. The product can flow because of its own gravity, so it shall be properly packaged to avoid any leakage. If it is leaked, please dispose it as non-dangerous goods.

Storage:

- > It shall be stored in a dry ventilated place and its shelf life is one year.
- > It shall be stored in a neutral ventilated place to avoid contact with acidic or alkaline substances.



TFT LIMITED

Fluoro Organic Materials

**We might adjust the grades and properties of our products without any further notices.
If the up-to-date information is needed,
please contact us.**

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