

Fluorosilicone Base Low Compression Set

Composition

Uncatalyzed fluorosilicone rubber based on fluorosilicone gum, and mixed evenly with some kinds of fillers and additives.

Characteristics

AFS®-R-C1000 is pale-yellow translucent fluorosilicone base. It has integrated advantages that both the silicone rubber and fluororubber have.

1.Its compression set is lower than normal ones of AFS®-R-M1000; 2.Wide application temperature range (-60°C~200°C); 3.Similar resistance to solvent & fuel oil to that of fluororubber; 4.Keeping high tensile force retention at high temperature which is like silicone rubber; 5.High insulation; 6.High selective permeability meets requirements of environmental protection.

Therefore it can be used as seal material in special condition with requirement of resistance to high and/or low temperature, oil and some other chemical mediums.

| Items | Testing method | Index | | | | |
|--|----------------|---|-----------|-----------|-----------|-----------|
| | | C1040 | C1050 | C1060 | C1070 | C1080 |
| Appearance | Eyeballing | translucent, smooth surface, without visible impurities | | | | |
| Hardness (Shore A) | ASTM D2240 | 40±5 | 50±5 | 60±5 | 70±5 | 80±5 |
| Specific Gravity (g/cm3) | ASTM D792 | 1.46±0.03 | 1.46±0.03 | 1.50±0.03 | 1.50±0.03 | 1.52±0.03 |
| Tensile Strength (MPa) Die C | ASTM D412 | ≥9 | ≥9 | ≥9 | ≥8 | ≥7 |
| Elongation at Break (%) Die C | ASTM D412 | ≥300 | ≥275 | ≥225 | ≥175 | ≥150 |
| Tear Strength (KN/m) Die C | ASTM D624 | ≥20 | ≥20 | ≥20 | ≥15 | ≥15 |
| Compression Set 177°C 22hr (25%) B type | ASTM D395 | ≤12 | ≤12 | ≤12 | ≤14 | ≤14 |
| Volume Change (reference fuel B) (%) (23°C×70hr) | ASTM D471 | ≤20 | ≤20 | ≤20 | ≤20 | ≤20 |

Properties obtained using 0.53phr DBPH. Molded 15min at 170°C, post-cured 4hr at 200°C. If other cure temperature needed, vulcanization system shall be changed.

Application

- 1.Aviation industry: seals in aircraft to resist to fuels and/or lubricants, such as O-rings, spacers, integral tank sealing, sensor material, diaphragms and clips for spacers.
- 2.Auto industry: used as sealing rings, grease seals, diaphragms, pipes and valve-linings for various types of vehicles.
- 3.Petrochemistry industry: sealing parts used in pump, valve and oil tank, which are used under high/low temperature and chemical circumstance.
- 4.Medical and health care: used in manufacturing medical apparatus or instruments, artificial visceral organs, such as medical pipes, medical hoses for fluids and artificial valves.

Package Plastic bags, 12.5kg per sack, 2 sacks in 1 carton.

Storage Shall be stored in dry and ventilated places at room temperature (25°C). Validity is 1 year.

Transportation Transport it as non-dangerous cargo.

Attention:

- 1.The product shall be kept neutral, avoid being contacted with acid, alkaline substance.
- 2.The product can flow under its own weight. Keep it in good condition of packing during transportation and application in order it not to flow out.