

# Fluorosilicone Base General Purpose

## Composition

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

## Characteristics

AFS-R®-M1000 is translucent fluorosilicone base. It has integrated advantages that both the silicone rubber and fluororubber have.

1.Wide application temperature range (-60°C~200°C); 2.Similar resistance to solvent & fuel oil to that of fluororubber; 3.Keeping high tensile force retention at high temperature which is like silicone rubber; 4.High insulation; 5.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   |           |           |           |           |           |
|--|----------------|---|-----------|-----------|-----------|-----------|-----------|
|  |                | M1030   | M1040     | M1050     | M1060     | M1070     | M1080     |
| Appearance   | Eyeballing     | translucent, smooth surface, without visible impurities |           |           |           |           |           |
| Hardness (Shore A)                                     | ASTM D2240     | 30±5  | 40±5      | 50±5      | 60±5      | 70±5      | 80±5      |
| Specific Gravity (g/cm3)                               | ASTM D792      | 1.44±0.03   | 1.44±0.03 | 1.44±0.03 | 1.47±0.03 | 1.47±0.03 | 1.50±0.03 |
| Tensile Strength (MPa)<br>Die C                        | ASTM D412      | ≥7  | ≥9        | ≥9        | ≥9        | ≥8        | ≥7        |
| Elongation at Break (%)<br>Die C                       | ASTM D412      | ≥450  | ≥350      | ≥350      | ≥300      | ≥225      | ≥175      |
| Tear Strength (KN/m)<br>Die B                          | ASTM D624      | ≥20   | ≥20       | ≥20       | ≥20       | ≥15       | ≥15       |
| Compression Set 177°C<br>22hr (25%) B type             | ASTM D395      | ≤20   | ≤20       | ≤20       | ≤20       | ≤20       | ≤25       |
| Volume Change<br>(reference fuel B) (%)<br>(23°C×70hr) | ASTM D471      | ≤25   | ≤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.