

## FQE 307U

Fluorosilicone base compound

### Description

FQE 307U fluorosilicone is a base compound to be considered for applications exposed to non-polar fluids and solvents including fuels, oils and greases. This material typically exhibits the combination of excellent compression set with high tensile strength and elongation at break at low density.

### Key Features and Typical Benefits

- Excellent fuel and oil resistance
- Excellent heat resistance
- Good physical properties
- Very low compression set

### Typical Physical Properties

| Typical properties of the uncured FQE 307U fluorosilicone |            |                   |        |
|---|------------|-------------------|--------|
| Appearance  |            |                   | Opaque |
| Physical State  |            |                   | Solid  |
| Density   | JIS K 6249 | g/cm <sup>3</sup> | 1.45   |
| Plasticity  | JIS K 6249 |                   | 350    |

**Typical properties of the vulcanized rubber**

100 pbw FQE 307U fluorosilicone with 0.8 pbw 2,5-dimethyl-2,5-di(tert-butylperoxy)hexane (50%).

Vulcanization conditions: 10min/170 °C, post-curing: 4h/200 °C in hot air

|                                 |                     |         |      |
|---------------------------------|---------------------|---------|------|
| Hardness                        | JIS K 6249          | Shore A | 70   |
| Tensile strength                | JIS K 6249          | MPa     | 10.5 |
| Elongation at break             | JIS K 6249          | %       | 260  |
| Tear strength                   | JIS K 6252 Crescent | N/mm    | 14   |
| Tear strength                   | ASTM D 624 die B    | N/mm    | 18   |
| Compression Set<br>(22h/180 °C) | JIS K 6249          | %       | 5    |

Using other peroxides might result in different mechanical properties.

| <b>Properties after heat aging (Change)</b> |        |
|---|--------|
| 70h/225 °C                                  |        |
| Hardness                                    | +1 pt. |
| Elongation at break                         | -24%   |
| Tensile strength                            | -19%   |

Typical properties are average data and are not to be used as or to develop product specifications.

**Potential Applications**

FQE 307U fluorosilicone is an excellent candidate to consider for applications like:

- O-Rings
- Dynamic valves
- Diaphragms
- Seals and gaskets in contact with fuels, oils or greases

Customized ready-to-use compounds are available from Momentive.

**Processing Considerations**

Crosslinking can be carried out with most peroxides commonly used for the press

molding. While the crosslinking agent is being incorporated, the temperature of the compound should not exceed 40 °C. The rolls of the mixing mill should always be well cooled.

### **Packaging**

FQE 307U fluorosilicone is available in 20 kg boxes.

### **Compliance**

FQE 307U fluorosilicone is not compositionally compliant with 21 CFR §177.2600.

### **Patent Status**

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### **Product Safety, Handling and Storage**

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

### **Limitations**

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

### **Contact Information**

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For literature and technical assistance, visit our website at: [www.momentive.com](http://www.momentive.com)

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