NuSil MED-4840

Silicone Rubber, LSR

NuSil Technology

Message:

NuSil Technology's unrestricted materials may be considered for long-term implant applications (greater than 29 days).

Liquid silicone rubbers, or LSRs, are elastomer systems reinforced with silica. They contain functional polymers of lower average molecular weight and viscosity when compared to high consistency rubbers (HCRs). They are typically supplied as two-component systems and formulated in a 1:1 mix ratio. Because their consistency is akin to petroleum jelly, they are often pumped with injection molding equipment to form molded components such as o-rings, gaskets, valves, seals, and other precision molded parts.

LSRs are designed for liquid injection molding (LIM) processes which may utilize single or multi-cavity molds, or for overmolding processes. Originally designed for automated systems, they are developed with high volume applications in mind and benefit from their high strength. Comments: INJECTION MOLDING ELASTOMER

| General Information | | | | |
|--------------------------------|---------------------------------|--------------------|--|--|
| Filler / Reinforcement | Silica | | | |
| Features | Fast Cure | | | |
| | Good Colorability | | | |
| | High Strength | | | |
| | | | | |
| Uses | Gaskets | | | |
| | Medical/Healthcare Applications | | | |
| | Overmolding | | | |
| | Seals | | | |
| | Valves/Valve Parts | | | |
| | | | | |
| Agency Ratings | USP Class VI | | | |
| Forms | Liquid | | | |
| Processing Method | Liquid Injection Molding (LIM) | | | |
| Mechanical | Nominal Value | Unit | | |
| Tensile Strength (200% Strain) | 2.93 | MPa | | |
| Thermoset | Nominal Value Unit | | | |
| Thermoset Components | | | | |
| Part A | Mix Ratio by Weight: 1.0 | | | |
| Part B | Mix Ratio by Weight: 1.0 | | | |
| Additional Information | Nominal Value | Nominal Value Unit | | |
| Cure System | Platinum | Platinum | | |
| Extrusion Rate | 200 | g/min | | |
| Uncured Properties | Nominal Value | Unit | | |
| Density | 1.12 | g/cm ³ | | |
| Curing Time (150°C) | 0.083 | 0.083 hr | | |
| Pot Life (25°C) | > 1400 | > 1400 min | | |
| Cured Properties | Nominal Value | Unit | | |

| Shore Hardness (Shore A) | 40 | |
|-----------------------------|------|------|
| Tensile Strength | 7.58 | MPa |
| Tensile Elongation at Break | 550 | % |
| Tear Strength | 43.8 | kN/m |

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