NuSil MED-4770

Rubber

NuSil Technology

Message:

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

High consistency rubber, or HCR, consists of high molecular weight polymer combined with silica to produce a material that can be molded, extruded, or calendared into a useful end product. An HCR has the consistency of clay and is primarily formulated in a one or two part system (peroxide and platinum catalysts, respectively).

Most platinum cure high consistency rubbers are two component systems with an easy-to-work-with 1:1 mix ratio. Comments: ABRASION / FATIGUE RESISTANT

| General Information | | | |
|--------------------------------|-----------------------------|-------|--|
| Filler / Reinforcement | Silica gel filler | | |
| Features | High molecular weight | | |
| | Good wear resistance | | |
| | Fatigue resistance | | |
| | Low shrinkage | | |
| | | | |
| Uses | Medical/nursing supplies | | |
| Agency Ratings | USP Class VI | | |
| Processing Method | Extrusion | | |
| | Calendering | | |
| | Injection molding | | |
| | | | |
| Mechanical | Nominal Value | Unit | |
| Tensile Strength (100% Strain) | 4.14 | MPa | |
| Thermoset | Nominal Value | Unit | |
| Thermoset Components | | | |
| Component a | Mixing ratio by weight: 1.0 | | |
| Component B | Mixing ratio by weight: 1.0 | | |
| Post Cure Time (177°C) | 4.0 | hr | |
| Additional Information | Nominal Value | Unit | |
| Cure System | Platinum | | |
| Plasticity: 110 mils | | | |
| Uncured Properties | Nominal Value | Unit | |
| Density | 1.19 | g/cm³ | |
| Curing Time (138°C) | 0.17 | hr | |
| Pot Life (25°C) | 120 | min | |
| Cured Properties | Nominal Value | Unit | |
| Shore Hardness (Shore A) | 70 | | |
| Tensile Strength | 8.96 | MPa | |
| Tensile Elongation at Break | 700 | % | |

| Tear Strength | 49.9 | kN/m |
|---------------|------|------|
|---------------|------|------|

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