

CPT C-Flex® R70-005 Opaque Biocompatible TPE

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Elastomer, Melt-Processible Rubber

Material Notes:

C-Flex® is a family of patented thermoplastic elastomers which range in hardness from 5 shore A to 95 shore A. C-Flex® TPE's are biocompatible polymer blends which meet or exceed the current United States Pharmacopoeia Class VI test requirements. C-Flex® does not contain latex rubber, polyvinyl chloride, silicone rubber, or polyurethane. Information provided by Consolidated Polymer Technologies.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CPT-C-Flex-R70-005-Opaque-Biocompatible-TPE.php

| Physical Properties | Metric | English | Comments |
|-----------------------|---------------------|---------------------|--------------------------|
| Specific Gravity | 0.900 g/cc | 0.900 g/cc | ASTM D 792 |
| Linear Mold Shrinkage | 0.018 - 0.020 cm/cm | 0.018 - 0.020 in/in | |
| Melt Flow | 18.1 g/10 min | 18.1 g/10 min | Condition S; ASTM D 1238 |

| Mechanical Properties | Metric | English | Comments |
|--------------------------------|----------------------|---------------------|-----------------------------------|
| Hardness, Shore A | 30 | 30 | 1 sec.; ASTM D 2240 |
| Tensile Strength at Break | 5.83 MPa | 846 psi | ASTM D 412 |
| Elongation at Break | 774 % | 774 % | ASTM D 412 |
| 100% Modulus | 0.000689 GPa | 0.100 ksi | ASTM D 412 |
| 300% Modulus | 0.00124 GPa | 0.180 ksi | ASTM D 412 |
| Tear Strength | 26.3 kN/m | 150 pli | Notched, Die B; ASTM D 624 |
| | 35.1 kN/m | 200 pli | Die C; ASTM D 624 |
| Taber Abrasion, mg/1000 Cycles | 163 | 163 | Federal Test Method Standard, 405 |
| Compression Set | 11 % | 11 % | 23°C; ASTM D 412 |
| | 63 % | 63 % | ASTM D 412 |
| | @Temperature 70.0 °C | @Temperature 158 °F | |
| Tensile Set | 9.0 % | 9.0 % | at 300% elongation; ASTM D 412 |
| | 33 % | 33 % | at break; ASTM D 412 |

| Thermal Properties | Metric | English | Comments |
|-------------------------|----------|---------|------------|
| Brittleness Temperature | -73.3 °C | -100 °F | ASTM D 746 |

| Processing Properties | Metric | English | Comments |
|---------------------------|-----------------|----------------|--|
| Processing Temperature | 163 - 204 °C | 325 - 400 °F | Extrusion Temperature |
| Middle Barrel Temperature | 149 - 218 °C | 300 - 425 °F | Injection molding cylinder temperature |
| Drying Temperature | 65.6 - 93.3 °C | 150 - 200 °F | Desiccant type |
| Injection Pressure | 2.07 - 6.89 MPa | 300 - 1000 psi | |

| Descriptive Properties | Value | Comments |
|------------------------|--|---------------------------------|
| Sterilization methods: | Cobalt 60, Ethylene Oxide, Solution (cold) Sterilization | Steam/Autoclave not recommended |

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