

Product Texts

Zytel® SC315 NC010 is an unreinforced, lubricated 612 polyamide suitable for injection molding. It has been developed for applications such as parts for the healthcare industry.

SPECIAL CONTROL for HEALTHCARE APPLICATIONS

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in Europe and the USA when meeting applicable use conditions. This product is also tested against ISO 10993-5 and -11 and selected parts of USP Class VI. For details, individual compliance statements are available from our representative.

| Processing/Physical Characteristics | dry / cond | Unit | Test Standard |
|---|-------------------|-------------------|----------------------|
| ISO Data | | | |
| ^[C] Molding shrinkage, parallel | 1.3 / * | % | ISO 294-4, 2577 |
| ^[C] Molding shrinkage, normal | 1.4 / * | % | ISO 294-4, 2577 |
| ^[C] Density of melt | 900 | kg/m ³ | - |
| ^[C] Thermal conductivity of melt | 0.18 | W/(m K) | - |
| ^[C] Spec. heat capacity of melt | 2750 | J/(kg K) | - |

[C]: CAMPUS

| Mechanical properties | dry / cond | Unit | Test Standard |
|--|-------------------|-------------------|----------------------|
| ISO Data | | | |
| ^[C] Tensile Modulus | 2400 / 1700 | MPa | ISO 527 |
| ^[C] Yield stress | 62 / 54 | MPa | ISO 527 |
| ^[C] Yield strain | 4.5 / 18 | % | ISO 527 |
| ^[C] Nominal strain at break | 17 / >50 | % | ISO 527 |
| ^[C] Charpy impact strength, +23°C | N / N | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy impact strength, -30°C | N / 40 | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy notched impact strength, +23°C | 3.5 / 4 | kJ/m ² | ISO 179/1eA |
| ^[C] Charpy notched impact strength, -30°C | 3.5 / 3 | kJ/m ² | ISO 179/1eA |

[C]: CAMPUS

| Thermal properties | dry / cond | Unit | Test Standard |
|--|-------------------|-------------|----------------------|
| ISO Data | | | |
| ^[C] Melting temperature, 10°C/min | 218 / * | °C | ISO 11357-1/-3 |
| ^[C] Glass transition temperature, 10°C/min | 55 / * | °C | ISO 11357-1/-2 |
| ^[C] Temp. of deflection under load, 1.80 MPa | 62 / * | °C | ISO 75-1/-2 |
| ^[C] Temp. of deflection under load, 0.45 MPa | 135 / * | °C | ISO 75-1/-2 |
| ^[C] Vicat softening temperature, B | 181 / * | °C | ISO 306 |
| ^[C] Coeff. of linear therm. expansion, parallel | 110 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Coeff. of linear therm. expansion, normal | 120 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Oxygen index | 27 / * | % | ISO 4589-1/-2 |

[C]: CAMPUS

| Electrical properties | dry / cond | Unit | Test Standard |
|---|-------------------|-------------|----------------------|
| ISO Data | | | |
| ^[C] Relative permittivity, 100Hz | 3.6 / 5.1 | - | IEC 62631-2-1 |
| ^[C] Relative permittivity, 1MHz | 3.2 / 4 | - | IEC 62631-2-1 |
| ^[C] Dissipation factor, 100Hz | 135 / 700 | E-4 | IEC 62631-2-1 |
| ^[C] Dissipation factor, 1MHz | 160 / 400 | E-4 | IEC 62631-2-1 |
| ^[C] Volume resistivity | 1E13 / 1E11 | Ohm*m | IEC 62631-3-1 |
| ^[C] Electric strength | 30 / 30 | kV/mm | IEC 60243-1 |
| ^[C] Comparative tracking index | 600 / - | - | IEC 60112 |

[C]: CAMPUS

| Other properties | dry / cond | Unit | Test Standard |
|------------------------------------|-------------------|-------------------|----------------------|
| ^[C] Water absorption | 3 / * | % | Sim. to ISO 62 |
| ^[C] Humidity absorption | 1.3 / * | % | Sim. to ISO 62 |
| ^[C] Density | 1060 / - | kg/m ³ | ISO 1183 |

[C]: CAMPUS

| Material specific properties | dry / cond | Unit | Test Standard |
|-------------------------------------|-------------------|--------------------|----------------------|
| ISO Data | | | |
| ^[C] Viscosity number | 95 / * | cm ³ /g | ISO 307, 1157, 1628 |

[C]: CAMPUS

Characteristics**Processing**

Injection Molding

Delivery form

Pellets

Additives

Lubricants, Release agent

Certifications

Food contact, Medical Grade, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved

Applications

Medical

Regional Availability

North America, Europe, Asia Pacific, South and Central America