

Product Texts

Zytel® HTN high performance polyamide resins feature high retention of properties upon exposure to elevated temperature, to high moisture, and to harsh chemical environments. Polymer families and grades of Zytel® HTN are tailored to optimize performance as well as processability.

Typical applications with Zytel® HTN include demanding applications in the automotive, electrical and electronics, domestic appliances, and construction industries.

Zytel® HTNFE8200 NC010 is an unreinforced, toughened, heat stabilized high performance polyamide resin for injection molding. It is also a PPA resin.

| Processing/Physical Characteristics | dry / cond | Unit | Test Standard |
|---|----------------|-------------------|-----------------|
| ISO Data | | | |
| ^[C] Molding shrinkage, parallel | 0.8 / * | % | ISO 294-4, 2577 |
| ^[C] Molding shrinkage, normal | 0.9 / * | % | ISO 294-4, 2577 |
| ^[C] Density of melt | 970 | kg/m ³ | - |
| ^[C] Thermal conductivity of melt | 0.18 | W/(m K) | - |
| ^[C] Spec. heat capacity of melt | 2220 | J/(kg K) | - |
| ^[C] Ejection temperature | 225 | °C | - |

[C]: CAMPUS

| Mechanical properties | dry / cond | Unit | Test Standard |
|--|--------------------|-------------------|---------------|
| ISO Data | | | |
| ^[C] Tensile Modulus | 2200 / 2300 | MPa | ISO 527 |
| ^[C] Yield stress | 68 / 68 | MPa | ISO 527 |
| ^[C] Yield strain | 5.5 / 4.4 | % | ISO 527 |
| ^[C] Nominal strain at break | 14 / 10 | % | ISO 527 |
| ^[C] Charpy impact strength, +23°C | N / N | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy impact strength, -30°C | N / N | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy notched impact strength, +23°C | 75 / - | kJ/m ² | ISO 179/1eA |

ASTM Data

| | | | |
|-----------------------------|-----------------|-----|------------|
| Tensile Strength | 70.3 / - | MPa | ASTM D 638 |
| Elongation at Yield | 5.8 / - | % | ASTM D 638 |
| Elongation at Break | 18 / - | % | ASTM D 638 |
| Flexural Modulus | 2140 / - | MPa | ASTM D 790 |
| Izod Impact notched, 1/8 in | 800 / - | J/m | ASTM D 256 |

[C]: CAMPUS

| Thermal properties | dry / cond | Unit | Test Standard |
|--|----------------|-------|-----------------|
| ISO Data | | | |
| ^[C] Melting temperature, 10°C/min | 300 / * | °C | ISO 11357-1/-3 |
| ^[C] Temp. of deflection under load, 1.80 MPa | 126 / * | °C | ISO 75-1/-2 |
| ^[C] Temp. of deflection under load, 0.45 MPa | 138 / * | °C | ISO 75-1/-2 |
| ^[C] Coeff. of linear therm. expansion, parallel | 90 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Coeff. of linear therm. expansion, normal | 84 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Burning Behav. at 1.5 mm nom. thickn. | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 1.5 / * | mm | - |
| Yellow Card available | yes / * | - | - |
| ^[C] Burning Behav. at thickness h | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 0.8 / * | mm | - |
| Yellow Card available | yes / * | - | - |

ASTM Data

| | | | |
|---------------------|------------|----|-------------|
| UL 94 Flame rating | HB | - | UL 94 |
| Thickness tested | 1.5 | mm | - |
| DTUL @ 264 psi | 125 | °C | ASTM D 648 |
| Melting Temperature | 300 | °C | ASTM D 3418 |

[C]: CAMPUS

| Electrical properties | dry / cond | Unit | Test Standard |
|---|------------|-------|---------------|
| ISO Data | | | |
| ^[C] Volume resistivity | 1E13 / - | Ohm*m | IEC 62631-3-1 |
| ^[C] Surface resistivity | * / >1E15 | Ohm | IEC 62631-3-2 |
| ^[C] Comparative tracking index | 600 / - | - | IEC 60112 |

[C]: CAMPUS

| Other properties | dry / cond | Unit | Test Standard |
|------------------------------------|------------|-------------------|----------------|
| ^[C] Water absorption | 6.3 / * | % | Sim. to ISO 62 |
| ^[C] Humidity absorption | 1.9 / * | % | Sim. to ISO 62 |
| ^[C] Density | 1130 / - | kg/m ³ | ISO 1183 |
| Density | 1130 | kg/m ³ | ASTM D 792 |

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Features

Weldable

Delivery form

Pellets, Natural Color

Chemical Resistance

General Chemical Resistance

Additives

Lubricants, Release agent

Applications

Automotive, Electrical and Electronical

Special Characteristics

High impact or impact modified, Heat stabilized or stable to heat

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information

Injection molding

During molding, use proper protective equipment and adequate ventilation. Avoid exposure to fumes and limit the hold up time and temperature of the resin in the machine. Purge degraded resin carefully with HDPE.