# Stat-Tech™ CTX-1125 Natural

## Acrylonitrile Butadiene Styrene

### Key Characteristics

| Product Description | | | |
|---|---|---|---|
| Stat-Tech™ Electrically Conductive Compounds are specifically engineered to provide anti-static, ESD and RFI/EMI shielding performance for critical electronic equipment applications. These compounds combine the performance of select engineering resins with reinforcing additives such as carbon powder, carbon fiber, nickel-coated carbon fiber and stainless steel fiber, for low to high levels of conductivity depending upon application requirements. | | | |
| **General** | | | |
| Material Status | • Commercial: Active | | |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Filler / Reinforcement | • Nickel-Coated Carbon Fiber | | |
| Features | • Electromagnetic Shielding (EMI) | | |
| Uses | • Aerospace Applications<br>• Automotive Electronics | • Computer Components<br>• Connectors | • Electrical Housing<br>• Electrical/Electronic Applications |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

### Technical Properties [1]

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|---|---|---|---|
| Specific Gravity | 1.33 | 1.33 | ASTM D792 |
| Molding Shrinkage - Flow | 1.0E-4 to 2.0E-3 in/in | 0.010 to 0.20 % | ASTM D955 |
| **Mechanical** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Tensile Strength (Break) | 11000 psi | 75.8 MPa | ASTM D638 |
| Tensile Elongation [2] (Break) | 1.5 % | 1.5 % | ASTM D638 |
| Flexural Modulus | 1.00E+6 psi | 6890 MPa | ASTM D790 |
| Flexural Strength | 17000 psi | 117 MPa | ASTM D790 |
| **Impact** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Notched Izod Impact | | | ASTM D256A |
| 73°F (23°C), 0.125 in (3.18 mm), Injection Molded | 1.0 ft·lb/in | 53 J/m | |
| **Thermal** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 66 psi (0.45 MPa), Unannealed | 228 °F | 109 °C | |
| **Electrical** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Surface Resistivity | 10 to 1.0E+5 ohms | 10 to 1.0E+5 ohms | ASTM D257 |
| Volume Resistivity | 10 to 1.0E+5 ohms·cm | 10 to 1.0E+5 ohms·cm | ASTM D257 |
| Charge Decay Time - (Mil-B-81705C), 12% RH, 5000kV to 50kV | 2 msec | 2 msec | |
| Shielding Effectiveness | | | |
| 10GHz, 1/8" thickness | 36 dB | 36 dB | |
| 1GHz, 1/8" thickness | 16 dB | 16 dB | |
| 5GHz, 1/8" thickness | 26 dB | 26 dB | |
| **Flammability** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Flame Rating (Internal Method) | HB | HB | UL 94 |

## Processing Information

| Injection | Typical Value (English) | Typical Value (SI) |
|---|---|---|
| Drying Temperature | 190 °F | 87.8 °C |
| Drying Time | 2.0 to 4.0 hr | 2.0 to 4.0 hr |
| Suggested Max Moisture | 0.010 to 0.15 % | 0.010 to 0.15 % |
| Rear Temperature | 400 to 475 °F | 204 to 246 °C |
| Middle Temperature | 400 to 475 °F | 204 to 246 °C |
| Front Temperature | 400 to 475 °F | 204 to 246 °C |
| Nozzle Temperature | 420 to 500 °F | 216 to 260 °C |
| Mold Temperature | 140 to 200 °F | 60.0 to 93.3 °C |

### Notes

[1] Typical values are not to be construed as specifications.

[2] Type I, 0.20 in/min (5.1 mm/min)

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