

## AuroraTec™ ENV74-71617

Aurora Material Solutions, LLC - Engineering Thermoplastic Polyurethane

### General Information

#### Product Description

AuroraTec™ ENV74-71617 is a 20% fiberglass reinforced, black Thermoplastic Polyurethane (TPU) / Polycarbonate (PC) blend, injection molding grade.

Formerly branded as ENVIROPUR™

#### General

|                        |                                                                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material Status        | • Commercial: Active                                                                                                                                        |
| Availability           | <ul style="list-style-type: none"> <li>• Asia Pacific</li> <li>• Europe</li> <li>• Latin America</li> <li>• North America</li> </ul>                        |
| Filler / Reinforcement | • Glass Fiber, 20% Filler by Weight                                                                                                                         |
| Additive               | • Mold Release                                                                                                                                              |
| Features               | <ul style="list-style-type: none"> <li>• Abrasion Resistant</li> <li>• Chemical Resistant</li> <li>• Good Mold Release</li> <li>• Good Toughness</li> </ul> |
| Uses                   | • Military/Defense Applications                                                                                                                             |
| RoHS Compliance        | • RoHS Compliant                                                                                                                                            |
| Appearance             | • Black                                                                                                                                                     |
| Forms                  | • Pellets                                                                                                                                                   |
| Processing Method      | • Injection Molding                                                                                                                                         |

### Properties <sup>1</sup>

| Physical                                                | Nominal Value    | Unit     | Test Method |
|---------------------------------------------------------|------------------|----------|-------------|
| Density / Specific Gravity                              | 1.32             |          | ASTM D792   |
| Molding Shrinkage - Flow                                | 1.0E-3 to 3.0E-3 | in/in    | ASTM D955   |
| Water Absorption (24 hr)                                | 0.15             | %        | ASTM D570   |
| Ash Content                                             | 20               | %        | ASTM D5630  |
| Mechanical                                              | Nominal Value    | Unit     | Test Method |
| Tensile Strength (Break)                                | 12300            | psi      | ASTM D638   |
| Tensile Elongation (Break)                              | 3.0              | %        | ASTM D638   |
| Flexural Modulus - 1% Secant                            | 706000           | psi      | ASTM D790   |
| Flexural Strength                                       | 18000            | psi      | ASTM D790   |
| Impact                                                  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact (73°F)                              | 1.3              | ft·lb/in | ASTM D256   |
| Thermal                                                 | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 190              | °F       | ASTM D648   |

### Processing Information

| Injection          | Nominal Value | Unit |
|--------------------|---------------|------|
| Drying Temperature | 230 to 250    | °F   |
| Drying Time        | 4.0 to 6.0    | hr   |
| Rear Temperature   | 430 to 470    | °F   |
| Middle Temperature | 430 to 470    | °F   |
| Front Temperature  | 430 to 470    | °F   |
| Nozzle Temperature | 390 to 410    | °F   |
| Mold Temperature   | 110 to 150    | °F   |
| Back Pressure      | < 800         | psi  |
| Screw Speed        | 40 to 80      | rpm  |

