

## Technical Data Sheet

### *Diamaloy* ABSPC 9901U 2A920 CHARCOAL



Polycarbonate + ABS

#### Product Description

*Diamaloy* ABSPC 9901U 2A920 CHARCOAL GREYGRY is a Polycarbonate + ABS material and is typically used in Injection Molding applications. Features include: Ultra High Impact Resistance.

|                   |                              |
|-------------------|------------------------------|
| Processing Method | Injection Molding            |
| Attribute         | Ultra High Impact Resistance |

| Typical Properties                                                         | Nominal Value | Units             | Test Method |
|----------------------------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                                            |               |                   |             |
| Melt Flow Rate                                                             |               |                   |             |
| (200 °C/5.0 kg, Procedure A)                                               | 0.80          | g/10 min          | ASTM D1238  |
| (230 °C/3.8 kg, Procedure A)                                               | 3.9           | g/10 min          | ASTM D1238  |
| Density - Specific Gravity                                                 | 1.12          | g/cm <sup>3</sup> | ASTM D792   |
| <b>Mechanical</b>                                                          |               |                   |             |
| Tensile Strength at Yield, (51 mm/min)                                     | 55.2          | MPa               | ASTM D638   |
| Flexural Modulus                                                           | 2140          | MPa               | ASTM D790   |
| Tensile Modulus, (Injection Molded, Type I)                                | 2670          | MPa               | ASTM D638   |
| Flexural Strength at Break, (Method I (3 point load), Procedure A, Type I) | 70.7          | MPa               | ASTM D790   |
| <b>Impact</b>                                                              |               |                   |             |
| Notched Izod Impact, (23 °C, 3.18 mm)                                      | 590           | J/m               | ASTM D256   |
| <b>Hardness</b>                                                            |               |                   |             |
| Rockwell Hardness, (R-Scale)                                               | 112           |                   | ASTM D785   |
| <b>Thermal</b>                                                             |               |                   |             |
| Vicat Softening Temperature, (Loading 1 (10 N))                            | 125           | °C                | ASTM D1525  |
| Deflection Temperature Under Load Annealed (264 psi), (3.18 mm)            | 100           | °C                | ASTM D648   |
| Deflection Temperature Under Load Unannealed (264 psi), (3.18 mm)          | 90.0          | °C                | ASTM D648   |
| <b>UL Information</b>                                                      |               |                   |             |
| Flame Rating, (1.5 mm)                                                     | HB            |                   | UL 94       |
| UL File Number                                                             | E119088       |                   |             |

| Injection Parameters   | Nominal Value | Units |
|------------------------|---------------|-------|
| Drying Time            | 2.0 to 4.0    | hr    |
| Drying Temperature     | 90 to 100     | °C    |
| Suggested Max Moisture | 0.02          | %     |
| Nozzle Temperature     | 238 to 272    | °C    |
| Processing (Melt) Temp | 238 to 272    | °C    |
| Front Temperature      | 238 to 272    | °C    |
| Suggested Shot Size    | 40 to 70      | %     |
| Middle Temperature     | 235 to 265    | °C    |
| Rear Temperature       | 230 to 260    | °C    |
| Back Pressure          | 0.345 to 1.03 | MPa   |
| Mold Temperature       | 40 to 100     | °C    |