

## Technical Data Sheet

### *Diamond* ABS 3501 50249GRY



Acrylonitrile Butadiene Styrene

#### Product Description

*Diamond* ABS 3501 50249GRY is a Acrylonitrile Butadiene Styrene material and is typically used in Injection Molding applications. Features include: High Impact Resistance.

|                   |                        |
|-------------------|------------------------|
| Processing Method | Injection Molding      |
| Attribute         | High Impact Resistance |
| Forms             | Pellets                |

| Typical Properties                                                | Nominal Value | Units             | Test Method |
|-------------------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                                   |               |                   |             |
| Melt Flow Rate                                                    |               |                   |             |
| (200 °C/5.0 kg, Procedure A)                                      | 2.0           | g/10 min          | ASTM D1238  |
| (230 °C/3.8 kg, Procedure A)                                      | 5.0           | g/10 min          | ASTM D1238  |
| Density - Specific Gravity                                        | 1.05          | g/cm <sup>3</sup> | ASTM D792   |
| <b>Mechanical</b>                                                 |               |                   |             |
| Tensile Strength at Yield, (51 mm/min)                            | 44.8          | MPa               | ASTM D638   |
| Flexural Modulus, (1.3 mm/min, Tangent)                           | 2260          | MPa               | ASTM D790   |
| <b>Impact</b>                                                     |               |                   |             |
| Notched Izod Impact, (23 °C, 3.18 mm)                             | 300           | J/m               | ASTM D256   |
| <b>Hardness</b>                                                   |               |                   |             |
| Rockwell Hardness, (R-Scale)                                      | 106           |                   | ASTM D785   |
| <b>Thermal</b>                                                    |               |                   |             |
| Vicat Softening Temperature, (Loading 1 (10 N))                   | 104           | °C                | ASTM D1525  |
| Deflection Temperature Under Load Annealed (264 psi), (3.18 mm)   | 93.9          | °C                | ASTM D648   |
| Deflection Temperature Under Load Unannealed (264 psi), (3.18 mm) | 77.2          | °C                | ASTM D648   |
| <b>UL Information</b>                                             |               |                   |             |
| Flame Rating, (1.5 mm)                                            | HB            |                   | UL 94       |
| UL File Number                                                    | E51193        |                   |             |

| Injection Parameters   | Nominal Value | Units |
|------------------------|---------------|-------|
| Drying Time            | 2.0 to 4.0    | hr    |
| Drying Temperature     | 80 to 85      | °C    |
| Suggested Max Moisture | 0.1           | %     |
| Front Temperature      | 190 to 250    | °C    |
| Middle Temperature     | 190 to 250    | °C    |
| Rear Temperature       | 190 to 250    | °C    |
| Injection Rate         | Moderate-Fast |       |
| Mold Temperature       | 40 to 80      | °C    |