

## Technical Data Sheet

### *Diamond* ASA S950 50529 UVGRY



Acrylonitrile Styrene Acrylate

#### Product Description

*Diamond* ASA S950 50529 UVGRY is a Acrylonitrile Styrene Acrylate material and is typically used in Injection Molding applications. Features include: Good Weather Resistance, and Ultra High Impact Resistance.

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| <b>Processing Method</b> | Injection Molding                                     |
| <b>Attribute</b>         | Good Weather Resistance; Ultra High Impact Resistance |
| <b>Forms</b>             | Pellets                                               |

| 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)                                      | 2.5           | g/10 min          | ASTM D1238  |
| Density - Specific Gravity                                        | 1.07          | g/cm <sup>3</sup> | ASTM D792   |
| <b>Mechanical</b>                                                 |               |                   |             |
| Tensile Strength at Yield, (51 mm/min)                            | 35.9          | MPa               | ASTM D638   |
| Flexural Modulus, (1.3 mm/min, Tangent)                           | 1610          | MPa               | ASTM D790   |
| <b>Impact</b>                                                     |               |                   |             |
| Notched Izod Impact, (23 °C, 3.18 mm)                             | 430           | J/m               | ASTM D256   |
| <b>Hardness</b>                                                   |               |                   |             |
| Rockwell Hardness, (R-Scale)                                      | 87            |                   | 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)   | 91.1          | °C                | ASTM D648   |
| Deflection Temperature Under Load Unannealed (264 psi), (3.18 mm) | 75.0          | °C                | ASTM D648   |

| Injection Parameters   | Nominal Value | Units |
|------------------------|---------------|-------|
| Drying Time            | 2.0 to 4.0    | hr    |
| Drying Temperature     | 80 to 85      | °C    |
| Suggested Max Moisture | 0.1           | %     |
| Nozzle Temperature     | 220 to 272    | °C    |
| Processing (Melt) Temp | 220 to 272    | °C    |
| Front Temperature      | 235 to 272    | °C    |
| Suggested Shot Size    | 40 to 70      | %     |
| Middle Temperature     | 232 to 265    | °C    |
| Rear Temperature       | 230 to 260    | °C    |
| Injection Rate         | Fast          |       |
| Back Pressure          | 0.517 to 1.03 | MPa   |
| Mold Temperature       | 40 to 80      | °C    |