

## Technical Data Sheet

### *Diamond* ASA S246 50543 UVGRY



Acrylonitrile Styrene Acrylate

#### Product Description

*Diamond* ASA S246 50543 UVGRY is a Acrylonitrile Styrene Acrylate material and is typically used in Injection Molding applications. Features include: Good Flexibility, and Good Weather Resistance.

**Processing Method** Injection Molding

**Attribute** Good Flexibility; Good Weather Resistance

| Typical Properties                                                                  | Nominal Value | Units             | Test Method |
|-------------------------------------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                                                     |               |                   |             |
| Melt Flow Rate, (220 °C/10.0 kg, Procedure A)                                       | 20            | g/10 min          | ASTM D1238  |
| Density - Specific Gravity                                                          | 1.07          | g/cm <sup>3</sup> | ASTM D792   |
| <b>Mechanical</b>                                                                   |               |                   |             |
| Tensile Elongation at Yield, (51 mm/min, 23 °C, Injection Molded, Type I)           | 2.9           | %                 | ASTM D638   |
| Tensile Strength at Yield, (51 mm/min, 23 °C, Injection Molded, Type I)             | 45.9          | MPa               | ASTM D638   |
| Flexural Modulus, (1.3 mm/min, 3.18 mm, Method I (3 point load), 50.8 mm, Tangent)  | 2500          | MPa               | ASTM D790   |
| Tensile Modulus, (51 mm/min, 23 °C, Injection Molded, Type I, Tangent)              | 2570          | MPa               | ASTM D638   |
| <b>Impact</b>                                                                       |               |                   |             |
| Notched Izod Impact, (23 °C, 3.18 mm)                                               | 120           | J/m               | ASTM D256   |
| <b>Thermal</b>                                                                      |               |                   |             |
| Deflection Temperature Under Load Unannealed (264 psi), (3.18 mm, Injection Molded) | 78.9          | °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 | 0.02          | %     |
| Nozzle Temperature     | 220 to 260    | °C    |
| Processing (Melt) Temp | 220 to 260    | °C    |
| Front Temperature      | 235 to 260    | °C    |
| Suggested Shot Size    | 40 to 70      | %     |
| Middle Temperature     | 232 to 260    | °C    |
| Rear Temperature       | 230 to 249    | °C    |
| Injection Rate         | Fast          |       |
| Back Pressure          | 0.517 to 1.03 | MPa   |
| Mold Temperature       | 66 to 82      | °C    |