

## Technical Data Sheet

### *Diamond* ASA S210 40027 UVBZO



Acrylonitrile Styrene Acrylate

#### Product Description

*Diamond* ASA S210 40027 UVBZO is a Acrylonitrile Styrene Acrylate material and is typically used in Injection Molding applications. Features include: Good Weather Resistance, Medium Heat Resistance, and Medium Impact Resistance.

**Processing Method** Injection Molding

**Attribute** Good Weather Resistance; Medium Heat Resistance; Medium Impact Resistance

**Forms** Pellets

| Typical Properties                                     | Nominal Value | Units             | Test Method |
|--------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                        |               |                   |             |
| Melt Flow Rate                                         |               |                   |             |
| (200 °C/5.0 kg, Procedure A)                           | 1.8           | g/10 min          | ASTM D1238  |
| (230 °C/3.8 kg, Procedure A)                           | 5.4           | g/10 min          | ASTM D1238  |
| (220 °C/10.0 kg, Procedure A)                          | 18            | g/10 min          | ASTM D1238  |
| Density - Specific Gravity                             | 1.06          | g/cm <sup>3</sup> | ASTM D792   |
| <b>Mechanical</b>                                      |               |                   |             |
| Tensile Elongation at Yield, (51 mm/min, Type I)       | 2.0           | %                 | ASTM D638   |
| Tensile Strength at Yield, (51 mm/min, Type I)         | 45.9          | MPa               | ASTM D638   |
| Flexural Modulus, (1.3 mm/min, Tangent)                | 2340          | MPa               | ASTM D790   |
| Tensile Elongation at Break, (51 mm/min, Type I)       | 25            | %                 | ASTM D638   |
| <b>Impact</b>                                          |               |                   |             |
| Notched Izod Impact, (23 °C, 3.18 mm)                  | 100           | J/m               | ASTM D256   |
| <b>Thermal</b>                                         |               |                   |             |
| Vicat Softening Temperature, (Loading 1 (10 N))        | 105           | °C                | ASTM D1525  |
| Deflection Temperature Under Load Unannealed (264 psi) |               |                   |             |
| (3.18 mm)                                              | 83.9          | °C                | ASTM D648   |
| (6.35 mm)                                              | 88.9          | °C                | ASTM D648   |
| <b>Injection Parameters</b>                            |               |                   |             |
|                                                        | 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                |             |