

## Technical Data Sheet

### *Diamond* ASA S310UV 9904WHI



Acrylonitrile Styrene Acrylate

#### Product Description

*Diamond* ASA S310UV 9904WHI is a Acrylonitrile Styrene Acrylate material and is typically used in Injection Molding applications. Features include: Good Stiffness, Good Weather Resistance, and Medium Impact Resistance.

**Processing Method** Injection Molding

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

**Forms** Pellets

| Typical Properties                                     | Nominal Value | Units             | Test Method |
|--------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                        |               |                   |             |
| Melt Flow Rate, (230 °C/3.8 kg, Procedure A)           | 4.0           | g/10 min          | ASTM D1238  |
| Density - Specific Gravity                             | 1.06          | g/cm <sup>3</sup> | ASTM D792   |
| <b>Mechanical</b>                                      |               |                   |             |
| Tensile Strength at Yield, (51 mm/min)                 | 46.9          | MPa               | ASTM D638   |
| Flexural Modulus, (1.3 mm/min, Tangent)                | 2410          | MPa               | ASTM D790   |
| <b>Impact</b>                                          |               |                   |             |
| Notched Izod Impact, (23 °C, 3.18 mm)                  | 140           | J/m               | ASTM D256   |
| <b>Thermal</b>                                         |               |                   |             |
| Vicat Softening Temperature, (Loading 1 (10 N))        | 95.0          | °C                | ASTM D1525  |
| Deflection Temperature Under Load Unannealed (264 psi) |               |                   |             |
| (3.18 mm)                                              | 78.9          | °C                | ASTM D648   |
| (6.35 mm)                                              | 82.2          | °C                | ASTM D648   |
| <b>UL Information</b>                                  |               |                   |             |
| Flame Rating, (38.1 mm)                                | HB            |                   | UL 94       |
| UL File Number, (USA)                                  | E150937       |                   |             |

| 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    |