

# Diamond ASA S150U.7313 F9A Green

## LyondellBasell Industries - Acrylonitrile Styrene Acrylate

### General Information

#### Product Description

Diamond ASA S150UV.7313 F9A is a Acrylonitrile Styrene Acrylate material and is typically used in Injection Molding applications. Features include: Good Weather Resistance, and High Impact Resistance.

#### General

|                   |   |
|-------------------|---|
| Features          | <ul style="list-style-type: none"> <li>• Good Weather Resistance</li> <li>• High Impact Resistance</li> </ul> |
| Forms             | <ul style="list-style-type: none"> <li>• Pellets</li> </ul>   |
| Processing Method | <ul style="list-style-type: none"> <li>• Injection Molding</li> </ul>   |

### Properties <sup>1</sup>

| Physical   | Nominal Value | Unit                  | Test Method |
|--|---------------|-----------------------|-------------|
| Density / Specific Gravity   | 1.06          |                       | ASTM D792   |
| Density (73°F)   | 1.06          | g/cm <sup>3</sup>     | ISO 1183/A  |
| Melt Mass-Flow Rate (MFR)  |               |                       | ASTM D1238  |
| 220°C/10.0 kg  | 15            | g/10 min              |             |
| 230°C/3.8 kg   | 3.9           | g/10 min              |             |
| Melt Mass-Flow Rate (MFR)  |               |                       | ISO 1133    |
| 220°C/10.0 kg  | 15            | g/10 min              |             |
| 230°C/3.8 kg   | 3.9           | g/10 min              |             |
| Mechanical   | Nominal Value | Unit                  | Test Method |
| Tensile Strength - Flow <sup>2</sup> (Yield, 73°F, Injection Molded) | 6240          | psi                   | ASTM D638   |
| Tensile Stress - Flow (Yield, 73°F, Injection Molded)                | 6350          | psi                   | ISO 527-2   |
| Flexural Modulus - Chord, Flow (73°F, Injection Molded)              | 316000        | psi                   | ASTM D790   |
| Flexural Modulus - Chord, Flow (73°F, Injection Molded)              | 315000        | psi                   | ISO 178     |
| Impact   | Nominal Value | Unit                  | Test Method |
| Charpy Notched Impact Strength                                       |               |                       | ISO 179     |
| -22°F, Injection Molded  | 3.9           | ft·lb/in <sup>2</sup> |             |
| 73°F, Injection Molded   | 8.6           | ft·lb/in <sup>2</sup> |             |
| Notched Izod Impact - Flow   |               |                       | ASTM D256   |
| -22°F, Injection Molded  | 2.1           | ft·lb/in              |             |
| 73°F, Injection Molded   | 4.9           | ft·lb/in              |             |
| Notched Izod Impact Strength   |               |                       | ISO 180     |
| -22°F, Injection Molded  | 3.7           | ft·lb/in <sup>2</sup> |             |
| 73°F, Injection Molded   | 10            | ft·lb/in <sup>2</sup> |             |
| Hardness   | Nominal Value | Unit                  | Test Method |
| Rockwell Hardness (R-Scale, 73°F, Injection Molded)                  | 100           |                       | ASTM D785   |
| Thermal  | Nominal Value | Unit                  | Test Method |
| Deflection Temperature Under Load                                    |               |                       | ASTM D648   |
| 66 psi, Unannealed, Injection Molded                                 | 193           | °F                    |             |
| Deflection Temperature Under Load (66 psi, Unannealed)               | 193           | °F                    | ISO 75-2/B  |
| Deflection Temperature Under Load                                    |               |                       | ASTM D648   |
| 264 psi, Unannealed, 0.125 in, Injection Molded                      | 170           | °F                    |             |
| 264 psi, Unannealed, 0.250 in  | 181           | °F                    |             |

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| Thermal  | Nominal Value | Unit     | Test Method             |
|--|---------------|----------|-------------------------|
| Deflection Temperature Under Load<br>264 psi, Unannealed | 170           | °F       | ISO 75-2/A              |
| Vicat Softening Temperature                              | 216           | °F       | ASTM D1525 <sup>3</sup> |
| Vicat Softening Temperature                              | 216           | °F       | ISO 306                 |
| CLTE - Flow (-22 to 176°F)                               | 5.2E-5        | in/in/°F | ISO 11359-2             |
| CLTE - Transverse (-22 to 176°F)                         | 5.4E-5        | in/in/°F | ISO 11359-2             |

**Processing Information**

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 176 to 185    | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Suggested Max Moisture | 0.10          | %    |
| Suggested Shot Size    | 40 to 70      | %    |
| Rear Temperature       | 446 to 500    | °F   |
| Middle Temperature     | 450 to 509    | °F   |
| Front Temperature      | 455 to 522    | °F   |
| Nozzle Temperature     | 428 to 522    | °F   |
| Processing (Melt) Temp | 428 to 522    | °F   |
| Mold Temperature       | 104 to 176    | °F   |
| Injection Rate         | Fast          |      |
| Back Pressure          | 75.0 to 149   | psi  |

**Notes**

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 2.0 in/min

<sup>3</sup> Loading 1 (10 N)