

# Radilon® S 35L 100 NAT

Polyamide 6

Radici Plastics

## Message:

PA6 medium-high viscosity extrusion grade. Lubricated. Natural colour.

Suitable for extrusion of tubes, profiles, bars, rods and sheets.

Also apt for injection moulding of high thickness items.

ISO 1043 : PA6

| General Information                                                |                       |             |                    |                 |
|--------------------------------------------------------------------|-----------------------|-------------|--------------------|-----------------|
| Additive                                                           | Lubricant             |             |                    |                 |
| Features                                                           | Lubricated            |             |                    |                 |
|                                                                    | Medium-high Viscosity |             |                    |                 |
| Uses                                                               | Profiles              |             |                    |                 |
|                                                                    | Rods                  |             |                    |                 |
|                                                                    | Sheet                 |             |                    |                 |
|                                                                    | Thick-walled Parts    |             |                    |                 |
|                                                                    | Tubing                |             |                    |                 |
| RoHS Compliance                                                    | RoHS Compliant        |             |                    |                 |
| Appearance                                                         | Natural Color         |             |                    |                 |
| Processing Method                                                  | Extrusion             |             |                    |                 |
|                                                                    | Injection Molding     |             |                    |                 |
| Resin ID (ISO 1043)                                                | PA6                   |             |                    |                 |
| Physical                                                           | Dry                   | Conditioned | Unit               | Test Method     |
| Density                                                            | 1.14                  | --          | g/cm <sup>3</sup>  | ISO 1183        |
| Water Absorption                                                   |                       |             |                    | ISO 62          |
| Saturation, 23°C, 2.00 mm                                          | 10                    | --          | %                  |                 |
| Equilibrium, 23°C, 2.00 mm, 50% RH                                 | 2.9                   | --          | %                  |                 |
| Viscosity Number (H <sub>2</sub> SO <sub>4</sub> (Sulphuric Acid)) | 205                   | --          | cm <sup>3</sup> /g | ISO 307         |
| Mechanical                                                         | Dry                   | Conditioned | Unit               | Test Method     |
| Tensile Modulus                                                    | 2900                  | --          | MPa                | ISO 527-2/1A/1  |
| Tensile Stress (Yield)                                             | 75.0                  | --          | MPa                | ISO 527-2/1A/50 |
| Tensile Strain (Yield)                                             | 4.0                   | --          | %                  | ISO 527-2/1A/50 |
| Nominal Tensile Strain at Break                                    | > 50                  | --          | %                  | ISO 527-2/1A/50 |
| Flexural Modulus <sup>1</sup>                                      | 2400                  | --          | MPa                | ISO 178         |

|                                        |              |             |                   |                |
|----------------------------------------|--------------|-------------|-------------------|----------------|
| Flexural Stress <sup>2</sup>           | 90.0         | --          | MPa               | ISO 178        |
| Impact                                 | Dry          | Conditioned | Unit              | Test Method    |
| Charpy Notched Impact Strength (23°C)  | 6.0          | --          | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Thermal                                | Dry          | Conditioned | Unit              | Test Method    |
| Heat Deflection Temperature            |              |             |                   |                |
| 0.45 MPa, Unannealed                   | 160          | --          | °C                | ISO 75-2/Bf    |
| 1.8 MPa, Unannealed                    | 60.0         | --          | °C                | ISO 75-2/Af    |
| Vicat Softening Temperature            | 195          | --          | °C                | ISO 306/B50    |
| Melting Temperature <sup>3</sup>       | 220          | --          | °C                | ISO 11357      |
| Electrical                             | Dry          | Conditioned | Unit              | Test Method    |
| Surface Resistivity                    | 1.0E+12      | 1.0E+10     | ohms              | IEC 60093      |
| Volume Resistivity                     | 1.0E+15      | 1.0E+13     | ohms·cm           | IEC 60093      |
| Comparative Tracking Index             | 600          | --          | V                 | IEC 60112      |
| Flammability                           | Dry          | Conditioned | Unit              | Test Method    |
| Burning Rate                           | 0.0          | --          | mm/min            | FMVSS 302      |
| Flame Rating (0.800 mm)                | HB           | --          |                   | UL 94          |
| Glow Wire Flammability Index (2.00 mm) | 750          | --          | °C                | IEC 60695-2-12 |
| Injection                              | Dry          | Unit        |                   |                |
| Drying Temperature - Desiccant Dryer   | 80.0         |             | °C                |                |
| Drying Time - Desiccant Dryer          | 2.0 to 4.0   |             | hr                |                |
| Dew Point - Desiccant Dryer            | < -20.0      |             | °C                |                |
| Suggested Max Moisture                 | 0.15         |             | %                 |                |
| Processing (Melt) Temp                 | 250 to 280   |             | °C                |                |
| Mold Temperature                       | 70.0 to 80.0 |             | °C                |                |
| Injection Rate                         | Moderate     |             |                   |                |
| Extrusion                              | Dry          | Unit        |                   |                |
| Drying Temperature                     | 80.0         |             | °C                |                |
| Drying Time                            | 2.0 to 4.0   |             | hr                |                |
| Suggested Max Moisture                 | 0.15         |             | %                 |                |
| Melt Temperature                       | 240 to 270   |             | °C                |                |
| NOTE                                   |              |             |                   |                |
| 1.                                     | 2.0 mm/min   |             |                   |                |
| 2.                                     | 2.0 mm/min   |             |                   |                |
| 3.                                     | 10°C/min     |             |                   |                |

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