

# Hiprolon® 400 VN

Polyamide 1012

Arkema

Message:

Hiprolon® 400 VN is a polyamide produced from a renewable source. This grade is a polyamide 10.12 neat resin.

| General Information                               |                            |                   |             |
|---------------------------------------------------|----------------------------|-------------------|-------------|
| Features                                          | Renewable Resource Content |                   |             |
| Processing Method                                 | Extrusion                  |                   |             |
|                                                   | Injection Molding          |                   |             |
| Physical                                          | Nominal Value              | Unit              | Test Method |
| Density                                           | 1.03                       | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption (Equilibrium, 23°C, 50% RH)      | 0.45                       | %                 | ISO 62      |
| Mechanical                                        | Nominal Value              | Unit              | Test Method |
| Tensile Modulus                                   | 1200                       | MPa               | ISO 527-2   |
| Tensile Stress (Yield)                            | 40.0                       | MPa               | ISO 527-2   |
| Tensile Strain (Break)                            | > 50                       | %                 | ISO 527-2   |
| Flexural Modulus                                  | 1100                       | MPa               | ISO 178     |
| Impact                                            | Nominal Value              | Unit              | Test Method |
| Charpy Notched Impact Strength                    |                            |                   | ISO 179/1eA |
| -30°C                                             | 14                         | kJ/m <sup>2</sup> |             |
| 23°C                                              | 20                         | kJ/m <sup>2</sup> |             |
| Charpy Unnotched Impact Strength                  |                            |                   | ISO 179/1eU |
| -30°C                                             | No Break                   |                   |             |
| 23°C                                              | No Break                   |                   |             |
| Thermal                                           | Nominal Value              | Unit              | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 50.0                       | °C                | ISO 75-2/A  |
| Melting Temperature                               | 190                        | °C                | ISO 11357-3 |
| Additional Information                            | Nominal Value              | Unit              | Test Method |
| ISO Shortname                                     | PA 1012, 22-010            |                   | ISO 1874    |
| Renewable Carbon Conent                           | > 43                       | %                 | ASTM D6866  |
| Injection                                         | Nominal Value              | Unit              |             |
| Drying Temperature                                | 80.0 to 90.0               | °C                |             |
| Drying Time                                       | 4.0                        | hr                |             |
| Processing (Melt) Temp                            | 220 to 280                 | °C                |             |
| Mold Temperature                                  | 20.0 to 60.0               | °C                |             |
| Extrusion                                         | Nominal Value              | Unit              |             |
| Drying Temperature                                | 80.0 to 90.0               | °C                |             |

|                  |            |    |
|------------------|------------|----|
| Drying Time      | 4.0        | hr |
| Melt Temperature | 210 to 260 | °C |

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