

# Rilsan® CLEAR G 300 HI

Polyamide Copolymer

Arkema

## Message:

Rilsan® Clear G 300 HI is a high performance transparent copolyamide. This grade has been designed for injection molding applications, requiring high impact resistance, while keeping outstanding flexibility, chemical resistance and ultra light weight of Rilsan® Clear range.

### MAIN APPLICATIONS

safety glasses for labs and production plants.

helmet eyeshades.

automotive and industrial markets.

| General Information                |                          |                   |                 |
|------------------------------------|--------------------------|-------------------|-----------------|
| Features                           | Good Chemical Resistance |                   |                 |
|                                    | Good Flexibility         |                   |                 |
|                                    | High Impact Resistance   |                   |                 |
| Uses                               | Automotive Applications  |                   |                 |
| Appearance                         | Clear/Transparent        |                   |                 |
| Processing Method                  | Injection Molding        |                   |                 |
| Physical                           | Nominal Value            | Unit              | Test Method     |
| Density                            | 1.01                     | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage                  |                          |                   | Internal Method |
| Across Flow : 40°C, 24 hr, 4.00 mm | 0.70                     | %                 |                 |
| Flow : 40°C, 24 hr, 4.00 mm        | 0.60                     | %                 |                 |
| Water Absorption                   |                          |                   | ISO 62          |
| 23°C, 24 hr                        | 0.90                     | %                 |                 |
| Equilibrium, 23°C, 50% RH          | 0.90                     | %                 |                 |
| Hardness                           | Nominal Value            | Unit              | Test Method     |
| Shore Hardness                     |                          |                   | ISO 868         |
| Shore D                            | 77                       |                   |                 |
| Shore D, 15 sec                    | 73                       |                   |                 |
| Mechanical                         | Nominal Value            | Unit              | Test Method     |
| Tensile Modulus                    | 715                      | MPa               | ISO 527-2       |
| Tensile Stress                     |                          |                   | ISO 527-2       |
| Yield                              | 24.0                     | MPa               |                 |
| Break                              | 50.0                     | MPa               |                 |
| Tensile Strain                     |                          |                   | ISO 527-2       |
| Yield                              | 6.0                      | %                 |                 |
| Break                              | > 250                    | %                 |                 |
| Flexural Modulus                   | 740                      | MPa               | ISO 178         |
| Impact                             | Nominal Value            | Unit              | Test Method     |
| Charpy Notched Impact Strength     |                          |                   | ISO 179         |

| -30°C                            | 19            | kJ/m <sup>2</sup> |             |
|----------------------------------|---------------|-------------------|-------------|
| 23°C                             | 94            | kJ/m <sup>2</sup> |             |
| Charpy Unnotched Impact Strength |               |                   | ISO 179     |
| -30°C                            | No Break      |                   |             |
| 23°C                             | No Break      |                   |             |
| Thermal                          | Nominal Value | Unit              | Test Method |
| Glass Transition Temperature     | 90.0          | °C                | ISO 11357-2 |
| Melting Temperature              | 103           | °C                | ISO 11357-3 |
| Optical                          | Nominal Value | Unit              | Test Method |
| Transmittance (2000 μm, 560 nm)  | 91.3          | %                 | ASTM D1003  |
| Refractive Index                 | 1.5030        |                   | ISO 489     |
| Injection                        | Nominal Value | Unit              |             |
| Drying Temperature               | 60.0          | °C                |             |
| Drying Time                      | 4.0 to 6.0    | hr                |             |
| Processing (Melt) Temp           | 210 to 270    | °C                |             |
| Mold Temperature                 | < 30.0        | °C                |             |

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