

# Durolon® IR2200 CR010

Polycarbonate

Unigel Plásticos

## Message:

Durolon® IR2200 CR010 is a Polycarbonate (PC) material. It is available in Europe, Latin America, or North America for injection molding or stretch blow molding.

Important attributes of Durolon® IR2200 CR010 are:

Flame Rated

Clarity

Food Contact Acceptable

Good Mold Release

Medium Viscosity

Typical applications include:

Bottles

Food Contact Applications

Medical/Healthcare

| General Information |                                                                                  |
|---------------------|----------------------------------------------------------------------------------|
| Features            | Food Contact Acceptable<br>Good Mold Release<br>High Clarity<br>Medium Viscosity |
| Uses                | Bottles<br>Medical/Healthcare Applications                                       |
| Agency Ratings      | FDA 21 CFR 177.1580                                                              |
| UL File Number      | E102385                                                                          |
| Appearance          | Clear - Blue Tint                                                                |
| Forms               | Pellets                                                                          |
| Processing Method   | Injection Molding<br>Stretch Blow Molding                                        |

| Physical                                 | Nominal Value | Unit              | Test Method          |
|------------------------------------------|---------------|-------------------|----------------------|
| Specific Gravity                         | 1.20          | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 12            | g/10 min          | ASTM D1238, ISO 1133 |
| Molding Shrinkage - Flow                 | 0.50 to 0.70  | %                 | ASTM D955            |
| Water Absorption (23°C, 24 hr)           | 0.23          | %                 | ASTM D570            |
| Hardness                                 | Nominal Value | Unit              | Test Method          |
| Rockwell Hardness                        |               |                   | ASTM D785            |
| M-Scale                                  | 75            |                   |                      |
| R-Scale                                  | 120           |                   |                      |
| Mechanical                               | Nominal Value | Unit              | Test Method          |
| Tensile Modulus                          | 2300          | MPa               | ASTM D638, ISO 527-2 |

|                                                         |                      |             |                       |
|---------------------------------------------------------|----------------------|-------------|-----------------------|
| Tensile Strength                                        |                      |             | ASTM D638, ISO 527-2  |
| Yield                                                   | 68.0                 | MPa         |                       |
| Break                                                   | 73.0                 | MPa         |                       |
| Tensile Elongation (Break)                              | 100                  | %           | ASTM D638, ISO 527-2  |
| Flexural Modulus                                        | 2350                 | MPa         | ASTM D790, ISO 178    |
| Flexural Strength                                       | 95.0                 | MPa         | ASTM D790, ISO 178    |
| <b>Impact</b>                                           | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>    |
| Notched Izod Impact (3.20 mm)                           | 830                  | J/m         | ASTM D256             |
| <b>Thermal</b>                                          | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>    |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 132                  | °C          | ASTM D648, ISO 75-2/A |
| CLTE - Flow                                             | 6.5E-5               | cm/cm/°C    | ASTM D696             |
| <b>Electrical</b>                                       | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>    |
| Volume Resistivity                                      | 1.0E+16              | ohms·cm     | ASTM D257             |
| Dielectric Strength (1.60 mm)                           | 29                   | kV/mm       | ASTM D149             |
| Dielectric Constant                                     |                      |             | ASTM D150             |
| 60 Hz                                                   | 2.91                 |             |                       |
| 1 MHz                                                   | 2.85                 |             |                       |
| Dissipation Factor                                      |                      |             | ASTM D150             |
| 60 Hz                                                   | 6.6E-4               |             |                       |
| 1 MHz                                                   | 9.2E-3               |             |                       |
| Arc Resistance                                          | 110                  | sec         | ASTM D495             |
| <b>Flammability</b>                                     | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>    |
| Flame Rating (1.50 mm)                                  | HB                   |             | UL 94                 |
| Glow Wire Ignition Temperature (3.20 mm)                | 960                  | °C          | IEC 60695-2-13        |
| <b>Optical</b>                                          | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>    |
| Refractive Index                                        | 1.586                |             | ASTM D542, ISO 489    |
| Transmittance                                           | 85.0                 | %           | ASTM D1003            |
| <b>Injection</b>                                        | <b>Nominal Value</b> | <b>Unit</b> |                       |
| Drying Temperature                                      | 120                  | °C          |                       |
| Drying Time                                             | 4.0                  | hr          |                       |
| Rear Temperature                                        | 260                  | °C          |                       |
| Middle Temperature                                      | 270                  | °C          |                       |
| Front Temperature                                       | 280                  | °C          |                       |
| Nozzle Temperature                                      | 270                  | °C          |                       |
| Processing (Melt) Temp                                  | 240 to 300           | °C          |                       |
| Mold Temperature                                        | 80.0 to 100          | °C          |                       |

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