

# CP PRYME® Polycarbonate PC100RULUV-18M

## BT Clear

Polycarbonate  
Chase Plastics Services Inc.

Message:

CP PRYME® Polycarbonate PC100RULUV-18M BT Clear is a Polycarbonate (PC) product. It is available in North America.

Characteristics include:

Good UV Resistance

UV Stabilized

| General Information                                          |                    |                    |             |
|--------------------------------------------------------------|--------------------|--------------------|-------------|
| UL YellowCard                                                | E313980-101021871  |                    |             |
| Additive                                                     | UV Stabilizer      |                    |             |
| Features                                                     | Good UV Resistance |                    |             |
| Appearance                                                   | Clear - Blue Tint  |                    |             |
| Forms                                                        | Pellets            |                    |             |
| Physical                                                     | Nominal Value      | Unit               | Test Method |
| Specific Gravity                                             | 1.20               | g/cm <sup>3</sup>  | ASTM D792   |
| Specific Volume                                              | 0.835              | cm <sup>3</sup> /g | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)                     | 18                 | g/10 min           | ASTM D1238  |
| Molding Shrinkage - Flow (3.20 mm)                           | 0.50 to 0.70       | %                  | ASTM D955   |
| Water Absorption                                             |                    |                    | ASTM D570   |
| 24 hr                                                        | 0.15               | %                  |             |
| Equilibrium, 23°C                                            | 0.35               | %                  |             |
| Equilibrium, 100°C                                           | 0.58               | %                  |             |
| Hardness                                                     | Nominal Value      | Unit               | Test Method |
| Rockwell Hardness                                            |                    |                    | ASTM D785   |
| M-Scale                                                      | 70                 |                    |             |
| R-Scale                                                      | 118                |                    |             |
| Mechanical                                                   | Nominal Value      | Unit               | Test Method |
| Tensile Strength <sup>1</sup>                                |                    |                    | ASTM D638   |
| Yield                                                        | 62.1               | MPa                |             |
| Break                                                        | 65.5               | MPa                |             |
| Tensile Elongation <sup>2</sup>                              |                    |                    | ASTM D638   |
| Yield                                                        | 7.0                | %                  |             |
| Break                                                        | 110                | %                  |             |
| Flexural Modulus <sup>3</sup> (50.0 mm Span)                 | 2340               | MPa                | ASTM D790   |
| Flexural Strength <sup>4</sup> (Yield, 50.0 mm Span)         | 93.1               | MPa                | ASTM D790   |
| Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel) | 10.0               | mg                 | ASTM D1044  |

| Impact                               | Nominal Value                      | Unit              | Test Method             |
|--------------------------------------|------------------------------------|-------------------|-------------------------|
| Notched Izod Impact (23°C)           | 690                                | J/m               | ASTM D256               |
| Unnotched Izod Impact (23°C)         | 3200                               | J/m               | ASTM D256               |
| Gardner Impact (23°C)                | 169                                | J                 | ASTM D3029              |
| Tensile Impact Strength <sup>5</sup> | 546                                | kJ/m <sup>2</sup> | ASTM D1822              |
| Thermal                              | Nominal Value                      | Unit              | Test Method             |
| Deflection Temperature Under Load    |                                    |                   | ASTM D648               |
| 0.45 MPa, Unannealed, 6.40 mm        | 138                                | °C                |                         |
| 1.8 MPa, Unannealed, 6.40 mm         | 132                                | °C                |                         |
| Vicat Softening Temperature          | 154                                | °C                | ASTM D1525 <sup>6</sup> |
| CLTE - Flow (-40 to 95°C)            | 6.8E-5                             | cm/cm/°C          | ASTM E831               |
| Specific Heat                        | 1260                               | J/kg/°C           | ASTM C351               |
| Thermal Conductivity                 | 0.19                               | W/m/K             | ASTM C177               |
| Optical                              | Nominal Value                      | Unit              | Test Method             |
| Refractive Index                     | 1.586                              |                   | ASTM D542               |
| Transmittance (2540 μm)              | 88.0                               | %                 | ASTM D1003              |
| Haze (2540 μm)                       | 1.0                                | %                 | ASTM D1003              |
| NOTE                                 |                                    |                   |                         |
| 1.                                   | Type I, 51 mm/min                  |                   |                         |
| 2.                                   | Type I, 51 mm/min                  |                   |                         |
| 3.                                   | 1.3 mm/min                         |                   |                         |
| 4.                                   | 1.3 mm/min                         |                   |                         |
| 5.                                   | Type S                             |                   |                         |
| 6.                                   | Rate B (120°C/h), Loading 2 (50 N) |                   |                         |

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