

## Styron EMERGE<sup>®</sup> 4330-15 Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

EMERGE<sup>®</sup> PC 4330-15 advanced resin is a polycarbonate resin offering ultraviolet light stability, high heat resistance and maximum toughness. Applications: Consumer Electronics and Information Technology Equipment Computer and Business Equipment Portable Electronics Information provided by Dow This product line was spun off from Dow Chemical to Styron in 2010.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Styron-EMERGE-4330-15-Polycarbonate.php](http://www.lookpolymers.com/polymer_Styron-EMERGE-4330-15-Polycarbonate.php)

| Physical Properties   | Metric                                               | English                                              | Comments   |
|-----------------------|------------------------------------------------------|------------------------------------------------------|------------|
| Specific Gravity      | 1.20 g/cc                                            | 1.20 g/cc                                            | ASTM D792  |
| Linear Mold Shrinkage | 0.0050 - 0.0070 cm/cm                                | 0.0050 - 0.0070 in/in                                | ASTM D955  |
| Melt Flow             | 15 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 Â°C | 15 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 Â°F | ASTM D1238 |

| Mechanical Properties      | Metric    | English       | Comments                                          |
|----------------------------|-----------|---------------|---------------------------------------------------|
| Hardness, Rockwell R       | 118       | 118           | ASTM D785                                         |
| Tensile Strength, Ultimate | 71.0 MPa  | 10300 psi     | 0.125 in, injection molded, unannealed; ASTM D638 |
| Tensile Strength, Yield    | 60.0 MPa  | 8700 psi      | 0.125 in, injection molded, unannealed; ASTM D638 |
| Elongation at Break        | 150 %     | 150 %         | 0.125 in, injection molded, unannealed; ASTM D638 |
| Tensile Modulus            | 2.41 GPa  | 350 ksi       | 0.125 in, injection molded, unannealed; ASTM D638 |
| Flexural Strength          | 96.5 MPa  | 14000 psi     | 0.125 in, injection molded, unannealed; ASTM D790 |
| Flexural Modulus           | 2.41 GPa  | 350 ksi       | 0.125 in, injection molded, unannealed; ASTM D790 |
| Izod Impact, Notched       | 8.54 J/cm | 16.0 ft-lb/in | ASTM D256                                         |
| Izod Impact, Unnotched     | NB        | NB            | ASTM D256                                         |
| Dart Drop, Total Energy    | 87.0 J    | 64.2 ft-lb    | 8000 ipm; ASTM D3763                              |

| Thermal Properties | Metric                                 | English                                  | Comments  |
|--------------------|----------------------------------------|------------------------------------------|-----------|
| CTE, linear        | 68.4 Âµm/m-Â°C<br>@Temperature -40.0 - | 38.0 Âµin/in-Â°F<br>@Temperature -40.0 - | ASTM D696 |

| Thermal Properties                          | 82.2 Â°C<br>Metric | 180 Â°F<br>English | Comments                        |
|---------------------------------------------|--------------------|--------------------|---------------------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 143 Â°C            | 289 Â°F            | 0.157 in, annealed; ASTM D648   |
| Deflection Temperature at 1.8 MPa (264 psi) | 127 Â°C            | 260 Â°F            | 0.157 in, unannealed; ASTM D648 |
|                                             | 140 Â°C            | 284 Â°F            | 0.157 in, annealed; ASTM D648   |
| Vicat Softening Point                       | 148 Â°C            | 298 Â°F            | 50Â°C/hr, 50N; ASTM D1525       |
| Flammability, UL94                          | HB                 | HB                 | 0.0630 in                       |
|                                             | HB                 | HB                 | 0.120 in                        |
| Oxygen Index                                | 26 %               | 26 %               | ASTM D2863                      |

| Electrical Properties | Metric                       | English                      | Comments  |
|-----------------------|------------------------------|------------------------------|-----------|
| Volume Resistivity    | 2.00e+17 ohm-cm              | 2.00e+17 ohm-cm              | ASTM D257 |
| Dielectric Constant   | 3.0<br>@Frequency 60 Hz      | 3.0<br>@Frequency 60 Hz      | ASTM D150 |
|                       | 3.0<br>@Frequency 1e+6 Hz    | 3.0<br>@Frequency 1e+6 Hz    | ASTM D150 |
| Dielectric Strength   | 16.5 kV/mm                   | 420 kV/in                    | ASTM D149 |
| Dissipation Factor    | 0.0010<br>@Frequency 60 Hz   | 0.0010<br>@Frequency 60 Hz   | ASTM D150 |
|                       | 0.0020<br>@Frequency 1e+6 Hz | 0.0020<br>@Frequency 1e+6 Hz | ASTM D150 |

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