

# Makroblend® DP7645

Polycarbonate + PET

Covestro - Polycarbonates

# PROSPECTOR®

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## Technical Data

### Product Description

(PC+PET) blend, impact modified, Injection molding grade, unreinforced

### General

|                           |   |
|---------------------------|---|
| Material Status           | • Commercial: Active  |
| Literature <sup>1</sup>   | • <a href="#">Technical Datasheet (Chinese (Traditional))</a><br>• <a href="#">Technical Datasheet (Chinese)</a><br>• <a href="#">Technical Datasheet (English)</a><br>• <a href="#">Technical Datasheet (German)</a><br>• <a href="#">Technical Datasheet (Japanese)</a> |
| Search for UL Yellow Card | • <a href="#">Covestro - Polycarbonates</a><br>• <a href="#">Makroblend®</a>  |
| Availability              | • Africa & Middle East<br>• Asia Pacific<br>• Europe<br>• Latin America<br>• North America  |
| Additive                  | • Impact Modifier   |
| Features                  | • Impact Modified   |
| RoHS Compliance           | • RoHS Compliant  |
| Processing Method         | • Injection Molding   |

| Physical                                   | Nominal Value (English)      | Nominal Value (SI)          | Test Method |
|--|------------------------------|-----------------------------|-------------|
| Density (73°F (23°C))                      | 1.20 g/cm <sup>3</sup>       | 1.20 g/cm <sup>3</sup>      | ISO 1183    |
| Apparent Density                           | 0.70 g/cm <sup>3</sup>       | 0.70 g/cm <sup>3</sup>      | ISO 60      |
| Melt Volume-Flow Rate (MVR) (260°C/5.0 kg) | 0.732 in <sup>3</sup> /10min | 12.0 cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                          |                              |                             | ISO 2577    |
| Across Flow <sup>3</sup>                   | 0.60 to 0.80 %               | 0.60 to 0.80 %              |             |
| Across Flow : 194°F (90°C), 1 hr           | 0.10 to 0.20 %               | 0.10 to 0.20 %              |             |
| Flow <sup>3</sup>                          | 0.60 to 0.80 %               | 0.60 to 0.80 %              |             |
| Flow : 194°F (90°C), 1 hr                  | 0.10 to 0.20 %               | 0.10 to 0.20 %              |             |

| Mechanical  | Nominal Value (English) | Nominal Value (SI) | Test Method  |
|---|-------------------------|--------------------|--------------|
| Tensile Modulus (73°F (23°C))                     | 305000 psi              | 2100 MPa           | ISO 527-2/1  |
| Tensile Stress                                    |                         |                    | ISO 527-2/50 |
| Yield, 73°F (23°C)                                | 7250 psi                | 50.0 MPa           |              |
| Break, 73°F (23°C)                                | 5800 psi                | 40.0 MPa           |              |
| Tensile Strain (Yield, 73°F (23°C))               | 4.5 %                   | 4.5 %              | ISO 527-2/50 |
| Nominal Tensile Strain at Break                   |                         |                    | ISO 527-2/50 |
| 73°F (23°C)                                       | > 50 %                  | > 50 %             |              |
| Flexural Modulus <sup>4</sup> (73°F (23°C))       | 305000 psi              | 2100 MPa           | ISO 178      |
| Flexural Stress <sup>4</sup>                      |                         |                    | ISO 178      |
| 3.5% Strain, 73°F (23°C)                          | 9430 psi                | 65.0 MPa           |              |
| 73°F (23°C)                                       | 10900 psi               | 75.0 MPa           |              |
| Flexural Strain at Flexural Strength <sup>5</sup> |                         |                    | ISO 178      |
| 73°F (23°C)                                       | 5.7 %                   | 5.7 %              |              |

| Impact                                       | Nominal Value (English)  | Nominal Value (SI)   | Test Method |
|--|--------------------------|----------------------|-------------|
| Charpy Notched Impact Strength (73°F (23°C)) | 26 ft·lb/in <sup>2</sup> | 55 kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy Unnotched Impact Strength             |                          |                      | ISO 179/1eU |
| -22°F (-30°C)                                | No Break                 | No Break             |             |
| 73°F (23°C)                                  | No Break                 | No Break             |             |
| Notched Izod Impact Strength                 |                          |                      | ISO 180/A   |
| -4°F (-20°C)                                 | 11 ft·lb/in <sup>2</sup> | 23 kJ/m <sup>2</sup> |             |
| 14°F (-10°C)                                 | 21 ft·lb/in <sup>2</sup> | 45 kJ/m <sup>2</sup> |             |
| 73°F (23°C)                                  | 24 ft·lb/in <sup>2</sup> | 50 kJ/m <sup>2</sup> |             |



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| Impact   | Nominal Value (English)              | Nominal Value (SI)                   | Test Method     |
|--|--------------------------------------|--------------------------------------|-----------------|
| Unnotched Izod Impact Strength<br>-22°F (-30°C)<br>73°F (23°C) | No Break<br>No Break                 | No Break<br>No Break                 | ISO 180         |
| Hardness   | Nominal Value (English)              | Nominal Value (SI)                   | Test Method     |
| Ball Indentation Hardness                                      | 14500 psi                            | 100 MPa                              | ISO 2039-1      |
| Thermal  | Nominal Value (English)              | Nominal Value (SI)                   | Test Method     |
| Heat Deflection Temperature<br>264 psi (1.8 MPa), Unannealed   | 201 °F                               | 94.0 °C                              | ISO 75-2/A      |
| Vicat Softening Temperature                                    | 271 °F                               | 133 °C                               | ISO 306/B120    |
| CLTE   |                                      |                                      | ISO 11359-2     |
| Flow : 73 to 131°F (23 to 55°C)                                | 3.9E-5 in/in/°F                      | 7.0E-5 cm/cm/°C                      |                 |
| Transverse : 73 to 131°F (23 to 55°C)                          | 3.9E-5 in/in/°F                      | 7.0E-5 cm/cm/°C                      |                 |
| Thermal Conductivity <sup>6</sup> (73°F (23°C))                | 1.4 Btu·in/hr/ft <sup>2</sup> /°F    | 0.20 W/m/K                           | ISO 8302        |
| Flammability   | Nominal Value (English)              | Nominal Value (SI)                   | Test Method     |
| Flame Rating   |                                      |                                      | UL 94           |
| 0.031 in (0.8 mm)  | HB                                   | HB                                   |                 |
| 0.06 in (1.6 mm)   | HB                                   | HB                                   |                 |
| Oxygen Index <sup>7</sup>                                      | 20 %                                 | 20 %                                 | ISO 4589-2      |
| Burning Rate - US-FMVSS<br>(> 39.4 mil (> 1.00 mm))            | passed                               | passed                               | ISO 3795        |
| Additional Information   | Nominal Value (English)              | Nominal Value (SI)                   | Test Method     |
| Gottfert Melt Viscosity <sup>8</sup> (500°F (260°C))           | 600 Pa·s                             | 600 Pa·s                             | Internal Method |
| ISO Shortname  | ISO<br>7792-<br>PC/PET,MHPR,-<br>020 | ISO<br>7792-<br>PC/PET,MHPR,-<br>020 |                 |

**Notes**

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> 600 bar

<sup>4</sup> 0.079 in/min (2.0 mm/min)

<sup>5</sup> 2 mm/min

<sup>6</sup> Cross-flow

<sup>7</sup> Procedure A

<sup>8</sup> 165/s



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### Where to Buy

#### Supplier

##### Covestro - Polycarbonates

Leverkusen, Germany

Telephone: +49-214-6009-2000

Web: <http://www.plastics.covestro.com/>

#### Distributor

##### ALBIS Plastic

*ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country.*

Telephone: +49-40-78105-0

Web: <http://www.albis.com/>

Availability: Algeria, Austria, Belgium, China, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hong Kong, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Spain, Sweden, Switzerland, Tunisia, Turkey, United Kingdom

##### Amco Polymers

Telephone: 800-262-6685

Web: <http://www.amcopolymers.com/>

Availability: North America

##### M. Holland Canada Company

Telephone: 905-665-1168

Web: <http://www.mholland.com/>

Availability: Canada

##### M. Holland Company

Telephone: 855-497-1403

Web: <http://www.mholland.com/>

Availability: Mexico, United States

##### PolyOne Distribution

*PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.*

Telephone: 800-894-4266

Web: <http://polyonedistribution.com/>

Availability: Global

