

# XYLEX™ X8210 resin

Polycarbonate + Polyester  
SABIC Innovative Plastics Europe

Message:  
PC+POLYESTER alloy. Unreinforced, transparent, impact modified for low temperature ductility

| General Information         |                     |                        |                 |
|-----------------------------|---------------------|------------------------|-----------------|
| Additive                    | Impact modifier     |                        |                 |
| Features                    | Impact modification |                        |                 |
|                             | ductility           |                        |                 |
| Appearance                  | Clear/transparent   |                        |                 |
| Processing Method           | Injection molding   |                        |                 |
| Physical                    | Nominal Value       | Unit                   | Test Method     |
| Specific Gravity            |                     |                        |                 |
| --                          | 1.20                | g/cm <sup>3</sup>      | ASTM D792       |
| --                          | 1.16                | g/cm <sup>3</sup>      | ISO 1183        |
| Melt Mass-Flow Rate (MFR)   |                     |                        | ASTM D1238      |
| 265°C/2.16 kg               | 10                  | g/10 min               | ASTM D1238      |
| 300°C/1.2 kg                | 14                  | g/10 min               | ASTM D1238      |
| Melt Volume-Flow Rate (MVR) |                     |                        | ISO 1133        |
| 265°C/2.16 kg               | 10.0                | cm <sup>3</sup> /10min | ISO 1133        |
| 300°C/1.2 kg                | 13.0                | cm <sup>3</sup> /10min | ISO 1133        |
| Molding Shrinkage           |                     |                        | Internal method |
| Flow: 3.20mm                | 0.50 - 0.80         | %                      | Internal method |
| Transverse flow: 3.20mm     | 0.40 - 0.60         | %                      | Internal method |
| Water Absorption            |                     |                        | ISO 62          |
| Saturated, 23°C             | 0.37                | %                      | ISO 62          |
| Equilibrium, 23°C, 50% RH   | 0.15                | %                      | ISO 62          |
| Mechanical                  | Nominal Value       | Unit                   | Test Method     |
| Tensile Modulus             |                     |                        |                 |
| -- <sup>1</sup>             | 1480                | MPa                    | ASTM D638       |
| --                          | 1500                | MPa                    | ISO 527-2/1     |
| Tensile Strength            |                     |                        |                 |
| Yield <sup>2</sup>          | 43.0                | MPa                    | ASTM D638       |
| Yield                       | 45.0                | MPa                    | ISO 527-2/50    |
| Fracture <sup>3</sup>       | 46.0                | MPa                    | ASTM D638       |
| Fracture                    | 45.0                | MPa                    | ISO 527-2/50    |
| Tensile Elongation          |                     |                        |                 |
| Yield <sup>4</sup>          | 5.0                 | %                      | ASTM D638       |

|                                                    |               |                   |                                           |
|----------------------------------------------------|---------------|-------------------|-------------------------------------------|
| Yield                                              | 4.6           | %                 | ISO 527-2/50                              |
| Fracture <sup>5</sup>                              | 150           | %                 | ASTM D638                                 |
| Fracture                                           | > 150         | %                 | ISO 527-2/50                              |
| Flexural Modulus                                   |               |                   |                                           |
| 50.0mm span <sup>6</sup>                           | 1600          | MPa               | ASTM D790                                 |
| -- <sup>7</sup>                                    | 1600          | MPa               | ISO 178                                   |
| Flexural Stress                                    |               |                   |                                           |
| --                                                 | 58.0          | MPa               | ISO 178                                   |
| Yield, 50.0mm span <sup>8</sup>                    | 65.0          | MPa               | ASTM D790                                 |
| Impact                                             | Nominal Value | Unit              | Test Method                               |
| Charpy Notched Impact Strength <sup>9</sup> (23°C) | 71            | kJ/m <sup>2</sup> | ISO 179/1eA                               |
| Notched Izod Impact                                |               |                   |                                           |
| -30°C                                              | 200           | J/m               | ASTM D256                                 |
| -20°C                                              | 640           | J/m               | ASTM D256                                 |
| 23°C                                               | 800           | J/m               | ASTM D256                                 |
| -30°C <sup>10</sup>                                | 11            | kJ/m <sup>2</sup> | ISO 180/1A                                |
| -10°C <sup>11</sup>                                | 30            | kJ/m <sup>2</sup> | ISO 180/1A                                |
| 23°C <sup>12</sup>                                 | 45            | kJ/m <sup>2</sup> | ISO 180/1A                                |
| Instrumented Dart Impact (23°C, Total Energy)      | 81.0          | J                 | ASTM D3763                                |
| Thermal                                            | Nominal Value | Unit              | Test Method                               |
| Deflection Temperature Under Load                  |               |                   |                                           |
| 0.45 MPa, unannealed, 3.20mm                       | 79.0          | °C                | ASTM D648                                 |
| 1.8 MPa, unannealed, 3.20mm                        | 75.0          | °C                | ASTM D648                                 |
| 1.8 MPa, unannealed, 100 mm span <sup>13</sup>     | 82.0          | °C                | ISO 75-2/Ae                               |
| 1.8 MPa, unannealed, 64.0mm span <sup>14</sup>     | 81.0          | °C                | ISO 75-2/Af                               |
| Vicat Softening Temperature                        |               |                   |                                           |
| --                                                 | 97.0          | °C                | ASTM D1525, ISO 306/B120 12 <sup>15</sup> |
| --                                                 | 92.0          | °C                | ISO 306/B50                               |
| Linear thermal expansion coefficient               |               |                   |                                           |
| Flow: -40 to 40°C                                  | 1.1E-4        | cm/cm/°C          | ASTM E831                                 |
| Flow: -40 to 40°C                                  | 8.3E-5        | cm/cm/°C          | ISO 11359-2                               |
| Lateral: -40 to 40°C                               | 1.1E-4        | cm/cm/°C          | ASTM E831                                 |
| Lateral: -40 to 40°C                               | 8.9E-5        | cm/cm/°C          | ISO 11359-2                               |
| Optical                                            | Nominal Value | Unit              | Test Method                               |
| Transmittance (2540 µm)                            | 85.0          | %                 | ASTM D1003                                |
| Haze (2540 µm)                                     | 4.0           | %                 | ASTM D1003                                |
| Injection                                          | Nominal Value | Unit              |                                           |
| Drying Temperature                                 | 65.6 - 76.7   | °C                |                                           |
| Drying Time                                        | 3.0 - 5.0     | hr                |                                           |
| Drying Time, Maximum                               | 8.0           | hr                |                                           |
| Suggested Max Moisture                             | 0.020         | %                 |                                           |

|                        |               |     |
|------------------------|---------------|-----|
| Suggested Shot Size    | 40 - 80       | %   |
| Rear Temperature       | 238 - 249     | °C  |
| Middle Temperature     | 238 - 260     | °C  |
| Front Temperature      | 243 - 266     | °C  |
| Nozzle Temperature     | 243 - 266     | °C  |
| Processing (Melt) Temp | 243 - 266     | °C  |
| Mold Temperature       | 43.3 - 60.0   | °C  |
| Back Pressure          | 0.172 - 0.517 | MPa |
| Screw Speed            | 20 - 100      | rpm |
| Vent Depth             | 0.013 - 0.020 | mm  |

#### NOTE

|     |                           |
|-----|---------------------------|
| 1.  | 50 mm/min                 |
| 2.  | Type 1, 50mm/min          |
| 3.  | Type 1, 50mm/min          |
| 4.  | Type 1, 50mm/min          |
| 5.  | Type 1, 50mm/min          |
| 6.  | 1.3 mm/min                |
| 7.  | 2.0 mm/min                |
| 8.  | 1.3 mm/min                |
| 9.  | 80*10*4 sp=62mm           |
| 10. | 80*10*4                   |
| 11. | 80*10*4                   |
| 12. | 80*10*4                   |
| 13. | 120*10*4 mm               |
| 14. | 80*10*4 mm                |
| 15. | 标准 B (120°C/h), 载荷2 (50N) |

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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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