

# Generic Copolyester

Copolyester

Generic

Message:

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This information is provided for comparative purposes only.

| General Information             |               |       |             |
|---------------------------------|---------------|-------|-------------|
| Physical                        | Nominal Value | Unit  | Test Method |
| Specific Gravity                |               |       |             |
| --                              | 1.13 - 1.33   | g/cm³ | ASTM D792   |
| 23°C                            | 1.23 - 1.27   | g/cm³ | ISO 1183    |
| --                              | 1.19 - 1.33   | g/cm³ | ASTM D1505  |
| Molding Shrinkage - Flow (23°C) | 0.20 - 0.61   | %     | ASTM D955   |
| Water Absorption (23°C, 24 hr)  | 0.12 - 0.50   | %     | ASTM D570   |
| Hardness                        | Nominal Value | Unit  | Test Method |
| Rockwell Hardness (23°C)        | 103 - 115     |       | ASTM D785   |
| Durometer Hardness (23°C)       | 55 - 95       |       | ASTM D2240  |
| Mechanical                      | Nominal Value | Unit  | Test Method |
| Tensile Modulus                 |               |       |             |
| 23°C                            | 1510 - 1950   | MPa   | ASTM D638   |
| 23°C                            | 1500 - 2120   | MPa   | ISO 527-2   |
| Tensile Strength                |               |       |             |
| Yield, 23°C                     | 42.3 - 58.0   | MPa   | ASTM D638   |
| Yield, 23°C                     | 43.0 - 50.0   | MPa   | ISO 527-2   |
| Fracture, 23°C                  | 23.4 - 53.2   | MPa   | ASTM D638   |
| Fracture, 23°C                  | 27.5 - 58.0   | MPa   | ISO 527-2   |
| Tensile Elongation              |               |       |             |
| Yield, 23°C                     | 4.0 - 7.4     | %     | ASTM D638   |
| Yield, 23°C                     | 4.0 - 7.0     | %     | ISO 527-2   |
| Fracture, 23°C                  | 30 - 340      | %     | ASTM D638   |
| Fracture, 23°C                  | 97 - 230      | %     | ISO 527-2   |
| Flexural Modulus                |               |       |             |
| 23°C                            | 1500 - 2540   | MPa   | ASTM D790   |
| 23°C                            | 1490 - 2120   | MPa   | ISO 178     |
| Flexural Strength               |               |       |             |
| 23°C                            | 64.8 - 77.6   | MPa   | ASTM D790   |
| 23°C                            | 59.0 - 68.0   | MPa   | ISO 178     |
| Yield, 23°C                     | 62.0 - 78.1   | MPa   | ASTM D790   |
| Films                           | Nominal Value | Unit  | Test Method |

|                                   |                 |                                               |             |
|-----------------------------------|-----------------|-----------------------------------------------|-------------|
| Film Thickness - Tested           | 25 - 320        | μm                                            |             |
| secant modulus                    |                 |                                               | ASTM D882   |
| MD                                | 1490 - 2200     | MPa                                           | ASTM D882   |
| TD                                | 1240 - 2120     | MPa                                           | ASTM D882   |
| Tensile Strength                  |                 |                                               |             |
| MD: Yield                         | 40.8 - 52.0     | MPa                                           | ASTM D882   |
| TD: Yield                         | 38.7 - 52.4     | MPa                                           | ASTM D882   |
| MD: Fracture                      | 23.0 - 59.6     | MPa                                           | ASTM D882   |
| TD: Fracture                      | 18.1 - 58.9     | MPa                                           | ASTM D882   |
| Fracture, 23°C                    | 20.0 - 45.0     | MPa                                           | ISO 527-3   |
| Tensile Elongation                |                 |                                               |             |
| MD: Yield                         | 3.0 - 7.3       | %                                             | ASTM D882   |
| TD: Yield                         | 4.0 - 7.3       | %                                             | ASTM D882   |
| MD: Fracture                      | 4.0 - 410       | %                                             | ASTM D882   |
| TD: Fracture                      | 4.0 - 550       | %                                             | ASTM D882   |
| Fracture, 23°C                    | 38 - 710        | %                                             | ISO 527-3   |
| Dart Drop Impact (23°C)           | 390 - 880       | g                                             | ASTM D1709  |
| Elmendorf Tear Strength           |                 |                                               | ASTM D1922  |
| MD                                | 25 - 1400       | g                                             | ASTM D1922  |
| TD                                | 12 - 1700       | g                                             | ASTM D1922  |
| Trouser Tear Resistance           | 10.4 - 36.0     | N/mm                                          | ISO 6383-1  |
| Oxygen Permeability (23°C)        | 9.8 - 33        | cm <sup>3</sup> ·mm/m <sup>2</sup> /atm/24 hr | ASTM D3985  |
| Water Vapor Transmission Rate     | 2.3 - 140       | g/m <sup>2</sup> /24 hr                       | ASTM F1249  |
| Impact                            | Nominal Value   | Unit                                          | Test Method |
| Notched Izod Impact               |                 |                                               |             |
| 23°C                              | 24 - 1000       | J/m                                           | ASTM D256   |
| 23°C                              | 4.5 - 130       | kJ/m <sup>2</sup>                             | ISO 180     |
| Instrumented Dart Impact          |                 |                                               |             |
| 23°C                              | 27.3 - 62.0     | J                                             | ASTM D3763  |
| 23°C                              | 13.5 - 44.5     | J                                             | ISO 6603-2  |
| Thermal                           | Nominal Value   | Unit                                          | Test Method |
| Deflection Temperature Under Load |                 |                                               |             |
| 0.45 MPa, not annealed            | 65.0 - 110      | °C                                            | ASTM D648   |
| 0.45 MPa, not annealed            | 70.0 - 74.0     | °C                                            | ISO 75-2/B  |
| 1.8 MPa, not annealed             | 62.0 - 92.0     | °C                                            | ASTM D648   |
| 1.8 MPa, not annealed             | 62.0 - 65.2     | °C                                            | ISO 75-2/A  |
| Glass Transition Temperature      | 71.0 - 110      | °C                                            | ASTM E1356  |
| Vicat Softening Temperature       |                 |                                               |             |
| --                                | 79.1 - 89.2     | °C                                            | ASTM D1525  |
| --                                | 66.5 - 89.5     | °C                                            | ISO 306     |
| CLTE - Flow                       | 5.0E-5 - 1.5E-4 | cm/cm/°C                                      | ASTM D696   |
| Thermal Conductivity (23°C)       | 0.19 - 0.21     | W/m/K                                         | ASTM C177   |

| Electrical                 | Nominal Value  | Unit  | Test Method |
|----------------------------|----------------|-------|-------------|
| Dielectric Strength (23°C) | 16             | kV/mm | ASTM D149   |
| Dielectric Constant (23°C) | 2.40 - 3.20    |       | ASTM D150   |
| Dissipation Factor (23°C)  | 4.7E-3 - 0.020 |       | ASTM D150   |
| Arc Resistance             | 128 - 158      | sec   | ASTM D495   |
| Optical                    | Nominal Value  | Unit  | Test Method |
| Gloss                      | 107 - 162      |       | ASTM D2457  |
| Transmittance              | 86.9 - 92.1    | %     | ASTM D1003  |
| Haze                       | 0.20 - 2.3     | %     | ASTM D1003  |
| Injection                  | Nominal Value  | Unit  |             |
| Drying Temperature         | 70.0 - 90.0    | °C    |             |
| Drying Time                | 3.0 - 6.1      | hr    |             |
| Processing (Melt) Temp     | 255 - 286      | °C    |             |
| Mold Temperature           | 20.0 - 52.2    | °C    |             |
| Injection instructions     |                |       |             |

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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

