

# Arnitel<sup>®</sup> PL380

## TPC-ET

Injection Molding, Food Contact Quality

Print Date: 2024-03-27

| PROPERTIES                             | TYPICAL DATA | UNIT                   | TEST METHOD       |
|--|--------------|------------------------|-------------------|
| RHEOLOGICAL PROPERTIES                 |              | VALUE                  |                   |
| Melt volume-flow rate                  | 31.5         | cm <sup>3</sup> /10min | ISO 1133          |
| Temperature                            | 230          | °C                     | ISO 1133          |
| Load                                   | 2.16         | kg                     | ISO 1133          |
| Molding shrinkage [parallel]           | 1.55         | %                      | Sim. to ISO 294-4 |
| Molding shrinkage [normal]             | 1.75         | %                      | Sim. to ISO 294-4 |
| MECHANICAL PROPERTIES                  |              | VALUE                  |                   |
| Shore D Hardness (3s)                  | 32           | —                      | ISO 868           |
| Tensile modulus                        | 44           | MPa                    | ISO 527-1/-2      |
| Stress at break                        | 16           | MPa                    | ISO 527-1/-2      |
| Nominal strain at break                | 525          | %                      | ISO 527-1/-2      |
| Stress at 5% strain                    | 2.2          | MPa                    | ISO 527-1/-2      |
| Stress at 10% strain                   | 4            | MPa                    | ISO 527-1/-2      |
| Stress at 50% strain                   | 7            | MPa                    | ISO 527-1/-2      |
| Stress at 100% strain                  | 8            | MPa                    | ISO 527-1/-2      |
| Charpy notched impact strength (+23°C) | N            | kJ/m <sup>2</sup>      | ISO 179/1eA       |
| Charpy notched impact strength (-30°C) | N            | kJ/m <sup>2</sup>      | ISO 179/1eA       |
| Izod notched impact strength (+23°C)   | N            | kJ/m <sup>2</sup>      | ISO 180/1A        |
| Izod notched impact strength (-20°C)   | N            | kJ/m <sup>2</sup>      | ISO 180/1A        |
| Izod notched impact strength (-30°C)   | N            | kJ/m <sup>2</sup>      | ISO 180/1A        |
| Flexural modulus                       | 50           | MPa                    | ISO 178           |

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| PROPERTIES                                   | TYPICAL DATA | UNIT   | TEST METHOD        |
|--|--------------|--------|--------------------|
| MECHANICAL PROPERTIES (DIE CUTTING)          | VALUE        |        |                    |
| Stress at break (normal)                     | 20           | MPa    | ISO 527-1/-2       |
| Tear strength (normal)                       | 97           | kN/m   | ISO 34-1; Method B |
| Tear strength (parallel)                     | 93           | kN/m   | ISO 34-1; Method B |
| Strain at break (normal)                     | 880          | %      | ISO 527-1/-2       |
| THERMAL PROPERTIES                           | VALUE        |        |                    |
| Melting temperature (10°C/min)               | 212          | °C     | ISO 11357-1/-3     |
| Coeff. of linear therm. expansion (parallel) | 1.5          | E-4/°C | ISO 11359-1/-2     |
| Coeff. of linear therm. expansion (normal)   | 1.5          | E-4/°C | ISO 11359-1/-2     |
| ELECTRICAL PROPERTIES                        | VALUE        |        |                    |
| Relative permittivity (100Hz)                | 4.7          | —      | IEC 62631-2-1      |
| Relative permittivity (1 MHz)                | 4.4          | —      | IEC 62631-2-1      |
| Dissipation factor (100 Hz)                  | 310          | E-4    | IEC 62631-2-1      |
| Dissipation factor (1 MHz)                   | 810          | E-4    | IEC 62631-2-1      |
| Volume resistivity                           | 1E12         | Ohm*m  | IEC 62631-3-1      |
| Electric strength                            | 20           | kV/mm  | IEC 60243-1        |
| Comparative tracking index                   | 600          | V      | IEC 60112          |
| OTHER PROPERTIES                             | VALUE        |        |                    |
| Density                                      | 1160         | kg/m³  | ISO 1183           |
| Water absorption                             | 7            | %      | Sim. to ISO 62     |
| Humidity absorption                          | 0.4          | %      | Sim. to ISO 62     |

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