

## DSM Arnitel® PL381-H TPC-ET

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyester TPE , Polyester, TP

Material Notes:

Injection Molding

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Arnitel-PL381-H-TPC-ET.php](http://www.lookpolymers.com/polymer_DSM-Arnitel-PL381-H-TPC-ET.php)

| Physical Properties | Metric  | English   | Comments  |
|---------------------|---|---|---|
| Density             | 1.16 g/cc   | 0.0419 lb/in <sup>3</sup>                           | ISO 1183  |
| Water Absorption    | 7.0 %   | 7.0 %   | Sim. To ISO 62  |
| Moisture Absorption | 0.400 %   | 0.400 %   | Sm. To ISO 62   |
| Melt Flow           | 32 g/10 min<br>@Load 2.16 kg,<br>Temperature 230 °C | 32 g/10 min<br>@Load 4.76 lb,<br>Temperature 446 °F | cm <sup>3</sup> /10min Melt<br>Volume-flow Rate; ISO 1133 |

| Mechanical Properties      | Metric                      | English                     | Comments     |
|----------------------------|-----------------------------|-----------------------------|--------------|
| Hardness, Shore D          | 32<br>@Time 3.00 sec        | 32<br>@Time 0.000833 hour   | ISO 868      |
| Tensile Strength, Ultimate | 14.0 MPa                    | 2030 psi                    | ISO 527-1/-2 |
| Tensile Stress             | 4.20 MPa<br>@Strain 10.0 %  | 609 psi<br>@Strain 10.0 %   | ISO 527-1/-2 |
|                            | 8.40 MPa<br>@Strain 100 %   | 1220 psi<br>@Strain 100 %   | ISO 527-1/-2 |
| Elongation at Break        | 450 %                       | 450 %                       | ISO 527-1/-2 |
| Tensile Modulus            | 0.0600 GPa                  | 8.70 ksi                    | ISO 527-1/-2 |
| Izod Impact Resistance     | NB                          | NB                          | ISO 180/1A   |
|                            | NB                          | NB                          | ISO 180/1A   |
| Charpy Impact, Notched     | NB<br>@Temperature 23.0 °C  | NB<br>@Temperature 73.4 °F  | ISO 179/1eA  |
|                            | NB<br>@Temperature -30.0 °C | NB<br>@Temperature -22.0 °F | ISO 179/1eA  |

| Thermal Properties              | Metric  | English  | Comments  |
|---------------------------------|---|--|---|
| CTE, linear, Parallel to Flow   | 150 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ | 83.3 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ | ISO 11359-1/-2                                    |
| CTE, linear, Transverse to Flow | 150 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ | 83.3 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ | ISO 11359-1/-2                                    |
| Melting Point                   | 212 $^{\circ}\text{C}$                          | 414 $^{\circ}\text{F}$                             | 10 $^{\circ}\text{C}/\text{min}$ ; ISO 11357-1/-3 |
| Vicat Softening Point           | 124 $^{\circ}\text{C}$                          | 255 $^{\circ}\text{F}$                             | 50 $^{\circ}\text{C}/\text{h}$ 10N; ISO 306       |

| Electrical Properties      | Metric                | English               | Comments    |
|----------------------------|-----------------------|-----------------------|-------------|
| Volume Resistivity         | 1.00e+14 ohm-cm       | 1.00e+14 ohm-cm       | IEC 60093   |
| Dielectric Constant        | 4.4                   | 4.4                   | IEC 60250   |
|                            | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |             |
| Dielectric Strength        | 4.7                   | 4.7                   | IEC 60250   |
|                            | @Frequency 100 Hz     | @Frequency 100 Hz     |             |
| Dielectric Strength        | 20.0 kV/mm            | 508 kV/in             | IEC 60243-1 |
| Dissipation Factor         | 0.031                 | 0.031                 | IEC 60250   |
|                            | @Frequency 100 Hz     | @Frequency 100 Hz     |             |
| Comparative Tracking Index | 0.081                 | 0.081                 | IEC 60250   |
|                            | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |             |
| Comparative Tracking Index | 600 V                 | 600 V                 | IEC 60112   |

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