

Covestro Apec® HT KU 1-9354/1 High-Heat Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, High Heat

Material Notes:

Transparent and opaque shades possible. Applications: Lighting, electrical parts. Information provided by Bayer. As of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and officially adopted its new name – Covestro.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Apec-HT-KU-1-93541-High-Heat-Polycarbonate.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|--------------------------------------|--------------------------------------|-----------------------|
| Density | 1.15 g/cc | 0.0415 lb/in ³ | |
| Water Absorption | 0.40 % | 0.40 % | Saturation in water |
| Moisture Absorption at Equilibrium | 0.20 % | 0.20 % | Equilibrium at 50% RH |
| Water Absorption at Saturation | 0.40 % | 0.40 % | |
| Melt Flow | 8.0 g/10 min | 8.0 g/10 min | |
| | @Load 2.16 kg, Temperature 330 °C | @Load 4.76 lb, Temperature 626 °F | |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|-------------------------|----------------------------|----------|
| Tensile Strength, Yield | 65.0 MPa | 9430 psi | |
| Elongation at Break | >= 50 % | >= 50 % | Nominal |
| Elongation at Yield | 7.0 % | 7.0 % | |
| Tensile Modulus | 2.30 GPa | 334 ksi | |
| Charpy Impact Unnotched | NB | NB | |
| | 0.800 J/cm ² | 3.81 ft-lb/in ² | |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Charpy Impact, Notched | 0.800 J/cm ² | 3.81 ft-lb/in ² | |

| Thermal Properties | Metric | English | Comments |
|------------------------------------|----------------------|----------------------|----------|
| CTE, linear, Parallel to Flow | 70.0 µm/m-°C | 38.9 µin/in-°F | |
| | @Temperature 20.0 °C | @Temperature 68.0 °F | |
| CTE, linear, Transverse to Flow | 70.0 µm/m-°C | 38.9 µin/in-°F | |
| | @Temperature 20.0 °C | @Temperature 68.0 °F | |
| Deflection Temperature at 0.46 MPa | 174 °C | 345 °F | |

| Thermal Properties | Metric | English | Comments |
|---|--------------------|----------------------|----------|
| Deflection Temperature at 1.8 MPa (264 psi) | 162 °C | 324 °F | |
| Vicat Softening Point | 183 °C | 361 °F | |
| Flammability, UL94 | V-2 | V-2 | |
| | @Thickness 1.60 mm | @Thickness 0.0630 in | |
| | V-0 | V-0 | |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |
| Oxygen Index | 35 % | 35 % | |

| Electrical Properties | Metric | English | Comments |
|----------------------------|--------------------|--------------------|----------|
| Electrical Resistivity | >= 1.00e+15 ohm-cm | >= 1.00e+15 ohm-cm | |
| Surface Resistance | >= 1.00e+15 ohm | >= 1.00e+15 ohm | |
| Dielectric Constant | 2.9 | 2.9 | |
| | @Frequency 100 Hz | @Frequency 100 Hz | |
| | 2.9 | 2.9 | |
| | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz | |
| Dielectric Strength | 30.0 kV/mm | 762 kV/in | |
| Dissipation Factor | 0.0017 | 0.0017 | |
| | @Frequency 100 Hz | @Frequency 100 Hz | |
| | 0.0084 | 0.0084 | |
| | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz | |
| Comparative Tracking Index | 275 V | 275 V | |

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