

SABIC Innovative Plastics LNP Stat-kon TE002

Category : Polymer , Thermoplastic , Polyurethane, TP

Material Notes:

LNP* Stat-kon* TE002 is a compound based on Polyurethane resin containing Carbon Fiber. Added features of this material include:
Electrically Conductive. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Stat-kon-TE002.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|---------------------------|---------------------------|------------------------------------|
| Density | 1.27 g/cc | 0.0459 lb/in ³ | ASTM D 792 |
| | 1.27 g/cc | 0.0459 lb/in ³ | ISO 1183 |
| Moisture Absorption at Equilibrium | 0.60 % | 0.60 % | 23 ^o C / 50% RH; ISO 62 |
| | 0.46 % @Time 86400 sec | 0.46 % @Time 24.0 hour | 50% RH; ASTM D 570 |
| Linear Mold Shrinkage, Flow | 0.0010 - 0.0030 cm/cm | 0.0010 - 0.0030 in/in | ASTM D 955 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.0020 - 0.0040 cm/cm | 0.0020 - 0.0040 in/in | ASTM D 955 |
| | @Time 86400 sec | @Time 24.0 hour | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------|----------|------------------------------|
| Tensile Strength at Break | 48.0 MPa | 6960 psi | Type I, 5 mm/min; ASTM D 638 |
| | 49.0 MPa | 7110 psi | 5 mm/min; ISO 527 |
| Tensile Strength, Yield | 50.0 MPa | 7250 psi | 5 mm/min; ISO 527 |
| | 52.0 MPa | 7540 psi | Type I, 5 mm/min; ASTM D 638 |
| Elongation at Break | 19.8 % | 19.8 % | 5 mm/min; ISO 527 |
| | 22.8 % | 22.8 % | Type I, 5 mm/min; ASTM D 638 |
| Elongation at Yield | 15.7 % | 15.7 % | 5 mm/min; ISO 527 |
| | 19.2 % | 19.2 % | Type I, 5 mm/min; ASTM D 638 |
| Tensile Modulus | 1.30 GPa | 189 ksi | 50 mm/min; ASTM D 638 |
| | 1.58 GPa | 229 ksi | 1 mm/min; ISO 527 |
| Flexural Strength | 51.0 MPa | 7400 psi | ISO 178 |

| Mechanical Properties | Metric | English | Comments |
|------------------------------|---|--|--|
| | 1.66 GPa | 241 ksi | 2 mm/min; ISO 178 |
| Izod Impact, Notched | 4.78 J/cm @Temperature 23.0 Â°C | 8.95 ft-lb/in @Temperature 73.4 Â°F | ASTM D 256 |
| Izod Impact, Unnotched | 16.89 J/cm @Temperature 23.0 Â°C | 31.64 ft-lb/in @Temperature 73.4 Â°F | ASTM D 4812 |
| Izod Impact, Notched (ISO) | 37.0 kJ/mÂ² @Temperature 23.0 Â°C | 17.6 ft-lb/inÂ² @Temperature 73.4 Â°F | 80*10*4; ISO 180/1A |
| Izod Impact, Unnotched (ISO) | 128 kJ/mÂ² @Temperature 23.0 Â°C | 60.9 ft-lb/inÂ² @Temperature 73.4 Â°F | 80*10*4; ISO 180/1U |
| Impact Test | 15.0 J | 11.1 ft-lb | Multiaxial Impact; ISO 6603 |
| | 23.0 J @Temperature 23.0 Â°C | 17.0 ft-lb @Temperature 73.4 Â°F | Instrumented Impact Total Energy; ASTM D 3763 |

| Thermal Properties | Metric | English | Comments |
|--|--|---|----------------------------------|
| CTE, linear, Parallel to Flow | 1.00 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C | 0.556 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F | ASTM D 696 |
| CTE, linear, Transverse to Flow | 16.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C | 8.89 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F | ASTM D 696 |
| Deflection Temperature at 0.46 MPa (66 psi) | 175 Â°C | 347 Â°F | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
| | 141 Â°C @Thickness 3.20 mm | 286 Â°F @Thickness 0.126 in | unannealed; ASTM D 648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 88.0 Â°C | 190 Â°F | Flatw 80*10*4 sp=64mm; ISO 75/Af |
| | 82.0 Â°C @Thickness 3.20 mm | 180 Â°F @Thickness 0.126 in | unannealed; ASTM D 648 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|--------|---------|----------|
|-----------------------|--------|---------|----------|

| Surface Resistance Electrical Properties | 5.0 - 8.0 ohm Metric | 5.0 - 8.0 ohm English | ASTM D 257 Comments |
|---|-------------------------|--------------------------|------------------------|
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Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China