

SABIC Innovative Plastics NORYL FN215X PPE+PS

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polystyrene (PS)

Material Notes:

Structural foam resin. 170F (77C) HDT. Improved reliability and productivity. All values at 20% weight reduction.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-FN215X-PPEPS.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|-----------------------|-----------------------|------------------------|
| Specific Gravity | 0.880 g/cc | 0.880 g/cc | foam molded; ASTM D792 |
| | 1.10 g/cc | 1.10 g/cc | ASTM D792 |
| Water Absorption | 0.070 % | 0.070 % | ASTM D570 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Moisture Absorption at Equilibrium | 0.17 % | 0.17 % | ASTM D570 |
| Linear Mold Shrinkage, Flow | 0.0060 - 0.0080 cm/cm | 0.0060 - 0.0080 in/in | SABIC Method |
| | @Thickness 6.40 mm | @Thickness 0.252 in | |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|-----------------------|-----------------------|--|
| Tensile Strength, Yield | 28.0 MPa | 4060 psi | ASTM D638 |
| | @Thickness 6.35 mm | @Thickness 0.250 in | |
| Elongation at Break | 12 % | 12 % | ASTM D638 |
| | @Thickness 6.35 mm | @Thickness 0.250 in | |
| Flexural Yield Strength | 61.0 MPa | 8850 psi | 6.4 mm; ASTM D790 |
| Flexural Modulus | 1.90 GPa | 276 ksi | 6.4 mm; ASTM D790 |
| Izod Impact, Unnotched | 2.02 J/cm | 3.78 ft-lb/in | ASTM D4812 |
| | @Thickness 6.40 mm | @Thickness 0.252 in | |
| Dart Drop, Total Energy | 10.0 J | 7.38 ft-lb | Instrumented Impact Energy @ peak; ASTM D3763 |
| | 3.00 J | 2.21 ft-lb | |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | Instrumented Impact Energy @ peak; ASTM D3763 |

| Thermal Properties | Metric | English | Comments |
|--|--------------------|---------------------|-----------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 88.0 °C | 190 °F | unannealed; ASTM D648 |
| | @Thickness 6.40 mm | @Thickness 0.252 in | |

| Thermal Properties (Temperature at 1.8 MPa (264 psi)) | 75.0 °C Metric | 169 °F English | Comments unannealed; ASTM D648 |
|---|--------------------|---------------------|-----------------------------------|
| | @Thickness 6.40 mm | @Thickness 0.252 in | |
| UL RTI, Electrical | 85.0 °C | 185 °F | UL 746B |
| UL RTI, Mechanical with Impact | 85.0 °C | 185 °F | UL 746B |
| UL RTI, Mechanical without Impact | 85.0 °C | 185 °F | UL 746B |
| Flammability, UL94 | V-1 | V-1 | UL 94 |
| | @Thickness 2.99 mm | @Thickness 0.118 in | |
| | V-0 | V-0 | UL 94 |
| | @Thickness 5.99 mm | @Thickness 0.236 in | |
| | 5VA | 5VA | UL 94 |
| | @Thickness 3.91 mm | @Thickness 0.154 in | |

| Electrical Properties | Metric | English | Comments |
|--------------------------------------|-----------------------|-----------------------|---------------------|
| Surface Resistance | >= 1.00e+17 ohm | >= 1.00e+17 ohm | ASTM D257 |
| Dielectric Constant | 2.2 | 2.2 | ASTM D150 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| Dielectric Strength | 12.0 kV/mm | 305 kV/in | in oil; ASTM D149 |
| | @Thickness 1.60 mm | @Thickness 0.0630 in | |
| Dissipation Factor | 0.0044 | 0.0044 | ASTM D150 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| Arc Resistance | 60 - 120 sec | 60 - 120 sec | Tungsten; ASTM D495 |
| Comparative Tracking Index | 400 - 600 V | 400 - 600 V | UL 746A |
| High Voltage Arc-Tracking Rate, HVTR | >= 150 mm/min | >= 5.91 in/min | UL 746A |

| Descriptive Properties | Value | Comments |
|---------------------------------------|-----------------------|----------|
| FOAM - Flame Class Minimum Density | 0.85g/cm ³ | |
| FOAM - IMPACT 6.4 mm Wt Reduction | 20% | |
| FOAM - MECHANICAL 6.4 mm Wt Reduction | 20% | |
| FOAM - PHYSICAL 6.4mm Wt Reduction | 20% | |

| FOAM - THERMAL 6.4mm Wt Reduction Descriptive Properties | 20% Value | Comments |
|---|--------------|-----------|
| Radiant Panel Listing | YES | UL Tested |
| UV-light, water exposure/immersion | F1 | UL 746C |

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