

Park Electrochemical Nelcote® E-761 Epoxy Prepreg, 3K PW Carbon Reinforced

Category : Polymer , Thermoset , Epoxy

Material Notes:

Nelcote® E-761 is a versatile self-adhesive epoxy matrix for use in aerospace and commercial application where ease of processing and cost are key considerations. Key Features and Benefits: Controlled flow for ease of processing Self adhesive for honeycomb or foam sandwich laminates without the use of film adhesive Flexible cure temperature 180°F to 250°F Good electrical properties Flame and fire retardant per FAR 25.853 Wet service temperatures up to 160°F Applications/Qualifications: Radomes Aircraft Interiors Secondary Aircraft Structures Sandwich Panels MRI Resonators Widely specified on commercial and military aircraft programs Information provided by Park Electrochemical Corp.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Park-Electrochemical-Nelcote-E-761-Epoxy-Prepreg-3K-PW-Carbon-Reinforced.php

| Physical Properties | Metric | English | Comments |
|---------------------|---------------------|---------------------|----------|
| Volatiles | <= 2.0 % | <= 2.0 % | 8 min |
| | @Temperature 135 °C | @Temperature 275 °F | |
| Thickness | 178 microns | 7.00 mil | Per Ply |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|----------------------|------------------------------|------------------------------|
| Tensile Strength, Yield | 545 MPa | 79000 psi | 0° Direction, Dry; ASTM D638 |
| | @Temperature 93.3 °C | @Temperature 200 °F | |
| | 565 MPa | 82000 psi | 0° Direction, Wet; ASTM D638 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 593 MPa | 86000 psi | 0° Direction, Dry; ASTM D638 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| Tensile Modulus | 621 MPa | 90000 psi | 0° Direction, Wet; ASTM D638 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| | 648 MPa | 94000 psi | 0° Direction, Dry; ASTM D638 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| | 57.9 GPa | 8400 ksi | 0° Direction, Wet; ASTM D638 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| 60.0 GPa | 8700 ksi | 0° Direction, Dry; ASTM D638 | |
| @Temperature 71.1 °C | @Temperature 160 °F | | |
| | 60.0 GPa | 8700 ksi | 0° Direction, Dry; ASTM D638 |

| Mechanical Properties | @Temperature 93.3 °C Metric | @Temperature 200 °F English | Comments |
|-----------------------|--------------------------------|--------------------------------|------------------------------|
| | 60.0 GPa | 8700 ksi | 0° Direction, Wet; ASTM D638 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| | 60.7 GPa | 8800 ksi | 0° Direction, Dry; ASTM D638 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| Flexural Strength | 490 MPa | 71000 psi | Wet; ASTM D790 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 545 MPa | 79000 psi | Dry; ASTM D790 |
| | @Temperature 93.3 °C | @Temperature 200 °F | |
| | 579 MPa | 84000 psi | Dry; ASTM D790 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 689 MPa | 100000 psi | Wet; ASTM D790 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| | 745 MPa | 108000 psi | Dry; ASTM D790 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| Flexural Modulus | 46.9 GPa | 6800 ksi | Wet; ASTM D790 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 46.9 GPa | 6800 ksi | Dry; ASTM D790 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 47.6 GPa | 6900 ksi | Dry; ASTM D790 |
| | @Temperature 93.3 °C | @Temperature 200 °F | |
| | 47.6 GPa | 6900 ksi | Wet; ASTM D790 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| | 49.6 GPa | 7200 ksi | Dry; ASTM D790 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| Compressive Strength | 310 MPa | 45000 psi | Wet; ASTM D695 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 310 MPa | 45000 psi | Dry; ASTM D695 |
| | @Temperature 93.3 °C | @Temperature 200 °F | |
| | 352 MPa | 51000 psi | Dry; ASTM D695 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |

| Mechanical Properties | 400 MPa Metric | 58000 psi English | Comments |
|-----------------------|----------------------|----------------------|-----------------------------|
| | @Temperature 21.1 °C | @Temperature 70.0 °F | Wet; ASTM D695 |
| | 427 MPa | 62000 psi | Dry; ASTM D695 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| Compressive Modulus | 57.9 GPa | 8400 ksi | Wet; ASTM D695 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| | 59.3 GPa | 8600 ksi | Wet; ASTM D695 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 59.3 GPa | 8600 ksi | Dry; ASTM D695 |
| | @Temperature 93.3 °C | @Temperature 200 °F | |
| | 62.1 GPa | 9000 ksi | Dry; ASTM D695 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| | 67.6 GPa | 9800 ksi | Dry; ASTM D695 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| Shear Strength | 30.3 MPa | 4400 psi | Short-Beam, Wet; ASTM D2344 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 32.4 MPa | 4700 psi | Short-Beam, Dry; ASTM D2344 |
| | @Temperature 93.3 °C | @Temperature 200 °F | |
| | 37.9 MPa | 5500 psi | Short-Beam, Dry; ASTM D2344 |
| | @Temperature 71.1 °C | @Temperature 160 °F | |
| | 44.8 MPa | 6500 psi | Short-Beam, Wet; ASTM D2344 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |
| | 51.0 MPa | 7400 psi | Short-Beam, Dry; ASTM D2344 |
| | @Temperature 21.1 °C | @Temperature 70.0 °F | |

| Thermal Properties | Metric | English | Comments |
|---------------------------|--------|---------|----------|
| Glass Transition Temp, Tg | 115 °C | 239 °F | Dry; DMA |

| Processing Properties | Metric | English | Comments |
|-----------------------|------------|------------|----------|
| Gel Time | 6.00 min | 6.00 min | |
| Shelf Life | 12.0 Month | 12.0 Month | |

| Processing Properties | @Temperature -17.8 °C Metric | @Temperature 0.000 °F English | Comments |
|--|---------------------------------|----------------------------------|-----------------|
| Descriptive Properties | | | |
| | | Value | Comments |
| Fabric Area Weight (g/m ²) | | 192.9 | |
| Prepreg Resin Content (%) | | 42 | |
| Resin Flow (%) | | 10 | 275°F, 50psi |

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