

## 3M Nextel™ AF-10 w/o sizing Aerospace Woven Fabric 312

Category : Ceramic , Oxide , Aluminum Oxide

### Material Notes:

Information provided by 3M

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_3M-Nextel-AF-10-wo-sizing-Aerospace-Woven-Fabric-312.php](http://www.lookpolymers.com/polymer_3M-Nextel-AF-10-wo-sizing-Aerospace-Woven-Fabric-312.php)

| Physical Properties | Metric      | English                   | Comments                                                   |
|---------------------|-------------|---------------------------|------------------------------------------------------------|
| Density             | 2.70 g/cc   | 0.0975 lb/in <sup>3</sup> |                                                            |
| Permeability        | 15          | 15                        | [ft <sup>3</sup> /min/ft <sup>2</sup> ],<br>Air w/o sizing |
| Thickness           | 250 microns | 9.84 mil                  |                                                            |
| Fiber Count         | 667 dtex    | 600 denier                | served roving                                              |

| Mechanical Properties     | Metric    | English    | Comments                           |
|---------------------------|-----------|------------|------------------------------------|
| Tensile Strength at Break | 1700 MPa  | 247000 psi | filament 25.4mm                    |
| Tensile Modulus           | 152 GPa   | 22000 ksi  | filament                           |
| Tear Strength             | 19.6 kN/m | 112 pli    | Warp, Breaking Strength w/o Sizing |
|                           | 24.5 kN/m | 140 pli    | Fill, Breaking Strength w/o Sizing |

| Thermal Properties     | Metric                                        | English                                         | Comments |
|------------------------|-----------------------------------------------|-------------------------------------------------|----------|
| CTE, linear            | 3.00 µm/m-°C<br>@Temperature 25.0 -<br>500 °C | 1.67 µin/in-°F<br>@Temperature 77.0 -<br>932 °F |          |
| Specific Heat Capacity | 1.05 J/g-°C<br>@Temperature 500 °C            | 0.251 BTU/lb-°F<br>@Temperature 932 °F          |          |
| Melting Point          | 1800 °C                                       | 3270 °F                                         |          |

| Optical Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
| Refractive Index   | 1.568  | 1.568   |          |

| Component Elements Properties | Metric | English | Comments |
|-------------------------------|--------|---------|----------|
| Al2O3                         | 62.5 % | 62.5 %  |          |
| B2O3                          | 13 %   | 13 %    |          |

| Component Elements Properties | Metric                 | English                | Comments |
|-------------------------------|------------------------|------------------------|----------|
| Electrical Properties         | Metric                 | English                | Comments |
| Dielectric Constant           | 5.2                    | 5.2                    |          |
|                               | @Frequency 9.375e+9 Hz | @Frequency 9.375e+9 Hz |          |
| Dissipation Factor            | 0.018                  | 0.018                  |          |
|                               | @Frequency 9.375e+9 Hz | @Frequency 9.375e+9 Hz |          |

**Contact Songhan Plastic Technology Co.,Ltd.**

Website : [www.lookpolymers.com](http://www.lookpolymers.com)  
Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)  
Tel : +86 021-51131842  
Mobile : +86 13061808058  
Skype : lookpolymers  
Address : United North Road 215,Fengxian District, Shanghai City,China