

## Hippe UP GM 204 Woven Glass Mat Reinforced Polyester (unsaturated) Resin - Sheet

Category : Polymer , Thermoset , Polyester, TS , Thermoset Polyester Glass Filled BMC

### Material Notes:

Used in mechanical and electrical applications. Very high mechanical properties at ambient temperatures. Good mechanical properties at elevated temperatures. Information provided by Hippe.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hippe-UP-GM-204-Woven-Glass-Mat-Reinforced-Polyester-unsaturated-Resin-Sheet.php](http://www.lookpolymers.com/polymer_Hippe-UP-GM-204-Woven-Glass-Mat-Reinforced-Polyester-unsaturated-Resin-Sheet.php)

| Physical Properties | Metric           | English          | Comments       |
|---------------------|------------------|------------------|----------------|
| Specific Gravity    | 1.50 - 1.90 g/cc | 1.50 - 1.90 g/cc | IEC 1212-2 8.1 |

| Mechanical Properties        | Metric                    | English                       | Comments                                     |
|------------------------------|---------------------------|-------------------------------|--|
| Tensile Strength             | >= 120 MPa                | >= 17400 psi                  | IEC 1212-2 5.7                               |
| Flexural Strength            | >= 250 MPa                | >= 36300 psi                  | Perpendicular to laminations; IEC 1212-2 5.1 |
| Flexural Modulus             | >= 10.0 GPa               | >= 1450 ksi                   | IEC 1212-2 5.2                               |
| Compressive Strength         | >= 250 MPa                | >= 36300 psi                  | Perpendicular to laminations; IEC 1212-2 5.3 |
| Shear Strength               | >= 20.0 MPa               | >= 2900 psi                   | Parallel to laminations; IEC 1212-2 5.6      |
| Izod Impact, Unnotched (ISO) | >= 44.0 kJ/m <sup>2</sup> | >= 20.9 ft-lb/in <sup>2</sup> | Parallel to laminations; IEC 1212-2 5.5.3    |
| Charpy Impact Unnotched      | >= 5.00 J/cm <sup>2</sup> | >= 23.8 ft-lb/in <sup>2</sup> | Parallel to laminations; IEC 1212-2 5.5.2    |

| Electrical Properties | Metric                    | English                   | Comments  |
|-----------------------|---------------------------|---------------------------|---|
| Insulation Resistance | >= 5.00e+8 ohm            | >= 5.00e+8 ohm            | After immersion in water; IEC 1212-2 6.3        |
| Dielectric Constant   | <= 4.5                    | <= 4.5                    | IEC 1212-2 6.2                                  |
|                       | @Frequency 48.0 - 62.0 Hz | @Frequency 48.0 - 62.0 Hz |   |
| Dielectric Breakdown  | <= 4.5                    | <= 4.5                    | In oil, parallel to laminations; IEC 1212-2 6.2 |
|                       | @Frequency 1.00e+6 Hz     | @Frequency 1.00e+6 Hz     |   |
|                       | >= 35000 V                | >= 35000 V                |   |
|                       | @Temperature 90.0 °C      | @Temperature 194 °F       |   |
|                       | <= 0.050                  | <= 0.050                  |   |

| Electrical Properties      | Metric                       | English                      | Comments       |
|----------------------------|------------------------------|------------------------------|----------------|
|                            | @Frequency 48.0 - 62.0<br>Hz | @Frequency 48.0 - 62.0<br>Hz | IEC 1212-2 6.2 |
|                            | <= 0.050                     | <= 0.050                     |                |
|                            | @Frequency 1.00e+6<br>Hz     | @Frequency 1.00e+6<br>Hz     | IEC 1212-2 6.2 |
| Comparative Tracking Index | >= 600 V                     | >= 600 V                     | IEC 1212-2 6.4 |

| Descriptive Properties | Value    | Comments                                   |
|------------------------|----------|--|
| Proof Tracking Index   | 500      | IEC 1212-2 6.4                             |
| Thermal Endurance      | 140 T.I. | IEC 1212-2 7.1                             |
| Water Absorption       | < 101 mg | IEC 1212-2 8.2; Test piece 50 x 50 x 10 mm |

## 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