

## Solvay Specialty Polymers Amodel® A-1115 HS Polyphthalamide (PPA) Resin, 15% Glass Reinforced, Dry As Molded

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 20% Glass Fiber Reinforced

### Material Notes:

AMODEL A-1115 HS resin is a 15% glass reinforced, heat stabilized polyphthalamide (PPA) which exhibits a high deflection temperature, high flexural modulus, and high tensile strength. Excellent creep resistance and low moisture absorption are also characteristic of this resin. AMODEL A-1115 HS resin can be easily processed using conventional equipment and methods. This product line was acquired by Solvay Advanced Polymers from BP Amoco in November 2001. MatWeb has an entry for this material conditioned at 50% RH.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Amodel-A-1115-HS-Polyphthalamide-PPA-Resin-15-Glass-Reinforced-Dry-As-Molded-nbsp.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-A-1115-HS-Polyphthalamide-PPA-Resin-15-Glass-Reinforced-Dry-As-Molded-nbsp.php)

| Physical Properties         | Metric       | English                   | Comments          |
|-----------------------------|--------------|---------------------------|-------------------|
| Density                     | 1.26 g/cc    | 0.0455 lb/in <sup>3</sup> | ASTM D792         |
| Water Absorption            | 0.30 %       | 0.30 %                    | 24 hrs. ASTM D570 |
| Linear Mold Shrinkage, Flow | 0.0060 cm/cm | 0.0060 in/in              | ASTM D955         |

| Mechanical Properties      | Metric     | English        | Comments   |
|----------------------------|------------|----------------|------------|
| Hardness, Rockwell R       | 127        | 127            | ASTM D785  |
| Tensile Strength, Ultimate | 128 MPa    | 18600 psi      | ASTM D638  |
| Elongation at Break        | 2.0 %      | 2.0 %          | ASTM D638  |
| Tensile Modulus            | 8.30 GPa   | 1200 ksi       | ASTM D638  |
| Flexural Yield Strength    | 171 MPa    | 24800 psi      | ASTM D790  |
| Flexural Modulus           | 6.20 GPa   | 899 ksi        | ASTM D790  |
| Compressive Yield Strength | 207 MPa    | 30000 psi      | ASTM D695  |
| Poissons Ratio             | 0.41       | 0.41           |            |
| Shear Modulus              | 2.94 GPa   | 426 ksi        | Calculated |
| Shear Strength             | 88.0 MPa   | 12800 psi      | ASTM D732  |
| Izod Impact, Notched       | 0.440 J/cm | 0.824 ft-lb/in | ASTM D256  |
| Izod Impact, Unnotched     | 4.38 J/cm  | 8.21 ft-lb/in  | ASTM D256  |

| Thermal Properties | Metric       | English        | Comments |
|--------------------|--------------|----------------|----------|
|                    | 12.0 µm/m-°C | 6.67 µin/in-°F |          |

| Thermal Properties                          | Metric                      | English                    | Comments                                |
|---|-----------------------------|----------------------------|---|
|   | @Temperature 160 - 250 °C   | @Temperature 320 - 482 °F  |   |
|   | 35.0 µm/m-°C                | 19.4 µin/in-°F             | FD; ASTM E831                           |
|   | @Temperature 0.000 - 100 °C | @Temperature 32.0 - 212 °F |   |
|   | 95.0 µm/m-°C                | 52.8 µin/in-°F             | TD; ASTM E831                           |
|   | @Temperature 160 - 250 °C   | @Temperature 320 - 482 °F  |   |
| CTE, linear, Transverse to Flow             | 59.0 µm/m-°C                | 32.8 µin/in-°F             | ASTM E381                               |
|   | @Temperature 0.000 - 100 °C | @Temperature 32.0 - 212 °F |   |
| Melting Point                               | 310 °C                      | 590 °F                     | ASTM D3418                              |
| Maximum Service Temperature, Air            | 160 °C                      | 320 °F                     | 20,000 hours continuous use; ASTM D3045 |
| Deflection Temperature at 0.46 MPa (66 psi) | 292 °C                      | 558 °F                     | ASTM D648                               |
| Deflection Temperature at 1.8 MPa (264 psi) | 277 °C                      | 531 °F                     | ASTM D648                               |
| Flammability, UL94                          | HB                          | HB                         |   |
|   | @Thickness 3.20 mm          | @Thickness 0.126 in        |   |
|   | HB                          | HB                         |   |
|   | @Thickness 3.20 mm          | @Thickness 0.126 in        |   |

| Electrical Properties  | Metric             | English            | Comments  |
|------------------------|--------------------|--------------------|-----------|
| Electrical Resistivity | 1.00e+16 ohm-cm    | 1.00e+16 ohm-cm    | ASTM D257 |
| Dielectric Constant    | 3.9                | 3.9                | ASTM D150 |
|                        | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |           |
|                        | 4.2                | 4.2                | ASTM D150 |
|                        | @Frequency 60 Hz   | @Frequency 60 Hz   |           |
| Dielectric Strength    | 19.0 kV/mm         | 483 kV/in          | ASTM D149 |
| Dissipation Factor     | 0.0060             | 0.0060             | ASTM D150 |
|                        | @Frequency 60 Hz   | @Frequency 60 Hz   |           |
|                        | 0.020              | 0.020              | ASTM D150 |
|                        | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |           |
| Arc Resistance         | 130 sec            | 130 sec            | ASTM D495 |

| Electrical Properties      | Metric | English | Comments |
|----------------------------|--------|---------|----------|
| Comparative Tracking Index | 550 V  | 550 V   |          |

| Processing Properties | Metric       | English      | Comments  |
|-----------------------|--------------|--------------|-----------|
| Melt Temperature      | 321 - 343 °C | 610 - 649 °F | Injection |

## 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