

## Overview of materials for Acetal Copolymer, 20% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, 20% Glass Fiber Reinforced

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acetal Copolymer, 20% Glass Fiber Reinforced". Specific grades with glass content between 15% and 24% are included. Each property range of values reported is minimum and maximum values of appropriate MatWeb entries. The comments report the average value, and number of data points used to calculate the average. The values are not necessarily typical of any specific grade, especially less common values and those that can be most affected by additives or processing methods.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Overview-of-materials-for-Acetal-Copolymer-20-Glass-Fiber-Reinforced.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Acetal-Copolymer-20-Glass-Fiber-Reinforced.php)

| Physical Properties                | Metric                 | English                            | Comments                                    |
|------------------------------------|------------------------|------------------------------------|---------------------------------------------|
| Density                            | 1.25 - 1.68 g/cc       | 0.0452 - 0.0607 lb/in <sup>3</sup> | Average value: 1.53 g/cc Grade Count:41     |
| Filler Content                     | 15.0 - 20.0 %          | 15.0 - 20.0 %                      | Average value: 18.2 % Grade Count:11        |
| Water Absorption                   | 0.0300 - 0.500 %       | 0.0300 - 0.500 %                   | Average value: 0.306 % Grade Count:14       |
| Moisture Absorption at Equilibrium | 0.200 - 0.340 %        | 0.200 - 0.340 %                    | Average value: 0.248 % Grade Count:6        |
| Water Absorption at Saturation     | 0.200 - 0.850 %        | 0.200 - 0.850 %                    | Average value: 0.717 % Grade Count:6        |
| Linear Mold Shrinkage              | 0.00300 - 0.0300 cm/cm | 0.00300 - 0.0300 in/in             | Average value: 0.00981 cm/cm Grade Count:32 |
| Linear Mold Shrinkage, Transverse  | 0.00900 - 0.0300 cm/cm | 0.00900 - 0.0300 in/in             | Average value: 0.0164 cm/cm Grade Count:11  |
| Melt Flow                          | 1.10 - 11.0 g/10 min   | 1.10 - 11.0 g/10 min               | Average value: 5.88 g/10 min Grade Count:9  |

| Mechanical Properties      | Metric                                        | English                                      | Comments                               |
|----------------------------|-----------------------------------------------|----------------------------------------------|----------------------------------------|
| Hardness, Rockwell M       | 82.0 - 89.0                                   | 82.0 - 89.0                                  | Average value: 84.3 Grade Count:4      |
| Hardness, Rockwell R       | 82.0 - 110                                    | 82.0 - 110                                   | Average value: 96.4 Grade Count:7      |
| Tensile Strength, Ultimate | 42.0 - 120 MPa                                | 6090 - 17400 psi                             | Average value: 83.0 MPa Grade Count:30 |
|                            | 32.0 - 50.0 MPa<br>@Temperature 60.0 - 120 °C | 4640 - 7250 psi<br>@Temperature 140 - 248 °F | Average value: 41.7 MPa Grade Count:1  |
| Tensile Strength, Yield    | 42.0 - 117 MPa                                | 6090 - 17000 psi                             | Average value: 79.2 MPa Grade Count:14 |
| Elongation at Break        | 1.50 - 22.9 %                                 | 1.50 - 22.9 %                                | Average value: 4.68 % Grade Count:37   |

| Mechanical Properties        | Metric                                                            | English                                                             | Comments                                              |
|------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------|
| Modulus of Elasticity        | 3.40 - 12.0 GPa                                                   | 493 - 1740 ksi                                                      | Average value: 6.02 GPa Grade Count:25                |
| Flexural Yield Strength      | 70.0 - 186 MPa                                                    | 10200 - 27000 psi                                                   | Average value: 123 MPa Grade Count:31                 |
| Flexural Modulus             | 3.20 - 8.96 GPa                                                   | 464 - 1300 ksi                                                      | Average value: 5.39 GPa Grade Count:34                |
|                              | 2.40 - 3.90 GPa<br>@Temperature 60.0 - 120 °C                     | 348 - 566 ksi<br>@Temperature 140 - 248 °F                          | Average value: 3.13 GPa Grade Count:1                 |
| Izod Impact, Notched         | 0.320 - 0.801 J/cm                                                | 0.599 - 1.50 ft-lb/in                                               | Average value: 0.575 J/cm Grade Count:26              |
| Izod Impact, Unnotched       | 3.50 - 5.87 J/cm                                                  | 6.56 - 11.0 ft-lb/in                                                | Average value: 5.05 J/cm Grade Count:13               |
| Izod Impact, Notched (ISO)   | 3.00 - 7.00 kJ/m <sup>2</sup>                                     | 1.43 - 3.33 ft-lb/in <sup>2</sup>                                   | Average value: 5.14 kJ/m <sup>2</sup> Grade Count:9   |
|                              | 6.00 - 6.00 kJ/m <sup>2</sup><br>@Temperature -30.0 - - 30.0 °C   | 2.86 - 2.86 ft-lb/in <sup>2</sup><br>@Temperature -22.0 - - 22.0 °F | Average value: 6.00 kJ/m <sup>2</sup> Grade Count:1   |
| Izod Impact, Unnotched (ISO) | 22.0 - 37.0 kJ/m <sup>2</sup>                                     | 10.5 - 17.6 ft-lb/in <sup>2</sup>                                   | Average value: 32.0 kJ/m <sup>2</sup> Grade Count:3   |
| Charpy Impact Unnotched      | 2.00 - 5.00 J/cm <sup>2</sup>                                     | 9.52 - 23.8 ft-lb/in <sup>2</sup>                                   | Average value: 3.67 J/cm <sup>2</sup> Grade Count:6   |
|                              | 4.00 - 5.00 J/cm <sup>2</sup><br>@Temperature -30.0 - - 30.0 °C   | 19.0 - 23.8 ft-lb/in <sup>2</sup><br>@Temperature -22.0 - - 22.0 °F | Average value: 4.33 J/cm <sup>2</sup> Grade Count:3   |
| Charpy Impact, Notched       | 0.350 - 0.950 J/cm <sup>2</sup>                                   | 1.67 - 4.52 ft-lb/in <sup>2</sup>                                   | Average value: 0.557 J/cm <sup>2</sup> Grade Count:13 |
|                              | 0.350 - 0.800 J/cm <sup>2</sup><br>@Temperature -30.0 - - 30.0 °C | 1.67 - 3.81 ft-lb/in <sup>2</sup><br>@Temperature -22.0 - - 22.0 °F | Average value: 0.525 J/cm <sup>2</sup> Grade Count:4  |
| Dart Drop, Total Energy      | 2.00 - 10.0 J                                                     | 1.48 - 7.38 ft-lb                                                   | Average value: 4.67 J Grade Count:3                   |

| Thermal Properties                 | Metric             | English               | Comments                                   |
|------------------------------------|--------------------|-----------------------|--------------------------------------------|
| CTE, linear                        | 30.0 - 100 µm/m-°C | 16.7 - 55.6 µin/in-°F | Average value: 58.6 µm/m-°C Grade Count:15 |
| CTE, linear, Transverse to Flow    | 79.2 - 110 µm/m-°C | 44.0 - 61.1 µin/in-°F | Average value: 89.6 µm/m-°C Grade Count:9  |
| Melting Point                      | 165 - 173 °C       | 329 - 344 °F          | Average value: 166 °C Grade Count:15       |
| Deflection Temperature at 0.46 MPa | 161 - 176 °C       | 322 - 348 °F          |                                            |

| (55 psi)<br>Thermal Properties              | Metric        | English      | Average value: 165 °C Grade Count:12<br>Comments |
|---------------------------------------------|---------------|--------------|--------------------------------------------------|
| Deflection Temperature at 1.8 MPa (264 psi) | 91.0 - 163 °C | 196 - 325 °F | Average value: 149 °C Grade Count:35             |
| Vicat Softening Point                       | 155 - 163 °C  | 311 - 325 °F | Average value: 159 °C Grade Count:4              |
| Flammability, UL94                          | HB            | HB           | Grade Count:24                                   |

| Electrical Properties      | Metric                 | English                | Comments                                      |
|----------------------------|------------------------|------------------------|-----------------------------------------------|
| Electrical Resistivity     | 4000 - 1.00e+17 ohm-cm | 4000 - 1.00e+17 ohm-cm | Average value: 6.60e+15 ohm-cm Grade Count:17 |
| Surface Resistance         | 1600 - 5.00e+16 ohm    | 1600 - 5.00e+16 ohm    | Average value: 4.63e+15 ohm Grade Count:12    |
| Dielectric Constant        | 4.00 - 4.50            | 4.00 - 4.50            | Average value: 4.22 Grade Count:5             |
| Dielectric Strength        | 17.7 - 35.0 kV/mm      | 450 - 889 kV/in        | Average value: 23.6 kV/mm Grade Count:11      |
| Dissipation Factor         | 0.00300 - 0.0200       | 0.00300 - 0.0200       | Average value: 0.00864 Grade Count:5          |
| Comparative Tracking Index | 500 - 600 V            | 500 - 600 V            | Average value: 583 V Grade Count:6            |

| Processing Properties  | Metric         | English          | Comments                               |
|------------------------|----------------|------------------|----------------------------------------|
| Processing Temperature | 80.0 - 230 °C  | 176 - 446 °F     | Average value: 166 °C Grade Count:14   |
| Die Temperature        | 190 - 210 °C   | 374 - 410 °F     | Average value: 199 °C Grade Count:7    |
| Melt Temperature       | 20.0 - 218 °C  | 68.0 - 425 °F    | Average value: 173 °C Grade Count:13   |
| Mold Temperature       | 60.0 - 121 °C  | 140 - 250 °F     | Average value: 92.6 °C Grade Count:13  |
| Drying Temperature     | 80.0 - 121 °C  | 176 - 250 °F     | Average value: 107 °C Grade Count:14   |
| Moisture Content       | 0.150 %        | 0.150 %          | Average value: 0.150 % Grade Count:9   |
| Dew Point              | -31.7 °C       | -25.0 °F         | Average value: -31.7 °C Grade Count:4  |
| Injection Pressure     | 60.0 - 140 MPa | 8700 - 20300 psi | Average value: 91.3 MPa Grade Count:15 |

## 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