

## Polikim EFALON® C-15 PTFE, 15% Glass Filled

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE , Polytetrafluoroethylene (PTFE), Glass Filled, Molded

### Material Notes:

C15 and C25 have less thermal expansion, higher wear resistance and less deformation under load compared to virgin Eفالon® (PTFE).

Applications: Seals, Seal rings, gaskets, valve sets, piston rings, bearings. Information provided by Polikim Polymer.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Polikim-EFALON-C-15-PTFE-15-Glass-Filled.php](http://www.lookpolymers.com/polymer_Polikim-EFALON-C-15-PTFE-15-Glass-Filled.php)

| Physical Properties | Metric                                                        | English                                                       | Comments             |
|---------------------|---------------------------------------------------------------|---------------------------------------------------------------|----------------------|
| Density             | 2.15 - 2.25 g/cc                                              | 0.0777 - 0.0813 lb/in³                                        | ASTM D792            |
| Deformation         | 2.8 - 3.0 %                                                   | 2.8 - 3.0 %                                                   | total                |
|                     | @Temperature 150 °C,<br>Time 86400 sec,<br>Pressure 0.981 MPa | @Temperature 302 °F,<br>Time 24.0 hour,<br>Pressure 142 psi   |                      |
|                     | 6.0 - 8.0 %                                                   | 6.0 - 8.0 %                                                   | permanent; ASTM D621 |
|                     | @Temperature 23.0 °C,<br>Time 86400 sec,<br>Pressure 13.7 MPa | @Temperature 73.4 °F,<br>Time 24.0 hour,<br>Pressure 1990 psi |                      |
|                     | 11 - 15 %                                                     | 11 - 15 %                                                     | total; ASTM D621     |
|                     | @Temperature 23.0 °C,<br>Time 86400 sec,<br>Pressure 13.7 MPa | @Temperature 73.4 °F,<br>Time 24.0 hour,<br>Pressure 1990 psi |                      |
|                     | 18 - 19 %                                                     | 18 - 19 %                                                     | total                |
|                     | @Temperature 150 °C,<br>Time 86400 sec,<br>Pressure 4.90 MPa  | @Temperature 302 °F,<br>Time 24.0 hour,<br>Pressure 711 psi   |                      |

| Mechanical Properties           | Metric                      | English               | Comments                  |
|---------------------------------|-----------------------------|-----------------------|---------------------------|
| Hardness, Shore D               | 60 - 64                     | 60 - 64               | ASTM D2240                |
| Tensile Strength, Ultimate      | 17.2 - 25.5 MPa             | 2490 - 3700 psi       | ASTM D638                 |
| Elongation at Break             | 250 - 280 %                 | 250 - 280 %           | ASTM D638                 |
| Compressive Strength            | 5.88 - 6.37 MPa             | 853 - 925 psi         | 1% Deformation; ASTM D695 |
| Izod Impact, Notched (ISO)      | 14.0 - 15.5 kJ/m²           | 6.66 - 7.38 ft-lb/in² | ASTM D256                 |
| Coefficient of Friction         | 0.060                       | 0.060                 |                           |
| Coefficient of Friction, Static | 0.050                       | 0.050                 |                           |
| Limiting Pressure Velocity      | 0.00343 - 0.00352 MPa-m/sec | 97.9 - 100 psi-ft/min | 3 m/min                   |

| Mechanical Properties | Metric                      | English              | Comments  |
|-----------------------|-----------------------------|----------------------|-----------|
|                       | 0.0049 - 0.00441 MPa-m/sec  | 117 - 126 psi-ft/min | 30 m/min  |
|                       | 0.00507 - 0.00523 MPa-m/sec | 145 - 149 psi-ft/min | 300 m/min |

| Thermal Properties               | Metric                                               | English                                                  | Comments   |
|----------------------------------|------------------------------------------------------|----------------------------------------------------------|------------|
| CTE, linear                      | 90.0 - 160 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ | 50.0 - 88.9 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$  | ASTM D696  |
|                                  | @Temperature 25.0 - 200 $^\circ\text{C}$             | @Temperature 77.0 - 392 $^\circ\text{F}$                 |            |
|                                  | 120 - 145 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$  | 66.7 - 80.6 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$  | ASTM D696  |
|                                  | @Temperature 25.0 - 100 $^\circ\text{C}$             | @Temperature 77.0 - 212 $^\circ\text{F}$                 |            |
|                                  | 150 - 180 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$  | 83.3 - 100 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$   | ASTM D696  |
|                                  | @Temperature 25.0 - 300 $^\circ\text{C}$             | @Temperature 77.0 - 572 $^\circ\text{F}$                 |            |
| Thermal Conductivity             | 0.335 - 0.377 W/m-K                                  | 2.32 - 2.61 BTU-in/hr-ft <sup>2</sup> - $^\circ\text{F}$ |            |
| Maximum Service Temperature, Air | 270 $^\circ\text{C}$                                 | 518 $^\circ\text{F}$                                     | continuous |
| Minimum Service Temperature, Air | -260 $^\circ\text{C}$                                | -436 $^\circ\text{F}$                                    |            |

| Electrical Properties | Metric                        | English                       | Comments                     |
|-----------------------|-------------------------------|-------------------------------|------------------------------|
| Volume Resistivity    | $\geq 1.00\text{e}+13$ ohm-cm | $\geq 1.00\text{e}+13$ ohm-cm | ASTM D257                    |
| Surface Resistance    | $\geq 1.00\text{e}+15$ ohm    | $\geq 1.00\text{e}+15$ ohm    | 50% rel. humidity; ASTM D257 |
| Dielectric Constant   | 2.3 - 2.5                     | 2.3 - 2.5                     | ASTM D150                    |
|                       | @Frequency 50.0 - 1.00e+7 Hz  | @Frequency 50.0 - 1.00e+7 Hz  |                              |
| Dielectric Strength   | 16.0 - 19.0 kV/mm             | 406 - 483 kV/in               | short term; ASTM D149        |
|                       | @Thickness 0.100 mm           | @Thickness 0.00394 in         |                              |
| Dielectric Loss Index | 0.00075                       | 0.00075                       | dry                          |
|                       | @Frequency 50.0 Hz            | @Frequency 50.0 Hz            |                              |

## Contact Songhan Plastic Technology Co.,Ltd.

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