

## Advanced Ceramics ACL 2087 Lithium Alumino-Silicate

Category : Ceramic , Glass , Glass Ceramic , Oxide , Silicon Oxide

### Material Notes:

A high strength glass-ceramic suitable for sealing to 17% chrome-iron or Nilo 48 Information provided by Advanced Ceramics Limited (ACL)

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Advanced-Ceramics-ACL-2087-Lithium-Alumino-Silicate.php](http://www.lookpolymers.com/polymer_Advanced-Ceramics-ACL-2087-Lithium-Alumino-Silicate.php)

| Physical Properties | Metric    | English                   | Comments |
|---------------------|-----------|---------------------------|----------|
| Density             | 2.40 g/cc | 0.0867 lb/in <sup>3</sup> |          |

| Mechanical Properties   | Metric               | English              | Comments |
|-------------------------|----------------------|----------------------|----------|
| Hardness, Rockwell 45 N | 75                   | 75                   |          |
| Modulus of Elasticity   | 82.7 GPa             | 12000 ksi            |          |
| Modulus of Rupture      | 0.271 GPa            | 39.3 ksi             |          |
|                         | @Temperature 700 °C  | @Temperature 1290 °F |          |
|                         | 0.312 GPa            | 45.3 ksi             |          |
|                         | @Temperature 300 °C  | @Temperature 572 °F  |          |
|                         | 0.350 GPa            | 50.8 ksi             |          |
|                         | @Temperature 20.0 °C | @Temperature 68.0 °F |          |
|                         | 0.363 GPa            | 52.6 ksi             |          |
|                         | @Temperature 500 °C  | @Temperature 932 °F  |          |

| Thermal Properties | Metric                     | English                     | Comments |
|--------------------|----------------------------|-----------------------------|----------|
| CTE, linear        | 11.7 µm/m-°C               | 6.50 µin/in-°F              |          |
|                    | @Temperature 20.0 - 800 °C | @Temperature 68.0 - 1470 °F |          |
|                    | 93.0 µm/m-°C               | 51.7 µin/in-°F              |          |
|                    | @Temperature 20.0 - 100 °C | @Temperature 68.0 - 212 °F  |          |

| Electrical Properties | Metric              | English              | Comments |
|-----------------------|---------------------|----------------------|----------|
| Volume Resistivity    | 1.40e+7 ohm-cm      | 1.40e+7 ohm-cm       |          |
|                       | @Temperature 700 °C | @Temperature 1290 °F |          |
|                       | 6.20e+9 ohm-cm      | 6.20e+9 ohm-cm       |          |

| Electrical Properties | @Temperature 500 °C<br>Metric | @Temperature 932 °F<br>English | Comments  |
|-----------------------|-------------------------------|--------------------------------|-----------|
|                       | 2.40e+15 ohm-cm               | 2.40e+15 ohm-cm                |           |
|                       | @Temperature 100 °C           | @Temperature 212 °F            |           |
|                       | 3.20e+16 ohm-cm               | 3.20e+16 ohm-cm                |           |
|                       | @Temperature 20.0 °C          | @Temperature 68.0 °F           |           |
| Dielectric Constant   | 5.1                           | 5.1                            |           |
|                       | @Frequency 9.60e+9 Hz         | @Frequency 9.60e+9 Hz          |           |
|                       | 5.5                           | 5.5                            |           |
|                       | @Frequency 1e+7 Hz            | @Frequency 1e+7 Hz             |           |
|                       | 6.1                           | 6.1                            |           |
|                       | @Frequency 10000 Hz           | @Frequency 10000 Hz            |           |
| Dielectric Strength   | 46.0 kV/mm                    | 1170 kV/in                     | Breakdown |
| Dissipation Factor    | 0.0019                        | 0.0019                         |           |
|                       | @Frequency 1e+7 Hz            | @Frequency 1e+7 Hz             |           |
|                       | 0.0040                        | 0.0040                         |           |
|                       | @Frequency 10000 Hz           | @Frequency 10000 Hz            |           |
|                       | 0.0056                        | 0.0056                         |           |
|                       | @Frequency 9.60e+9 Hz         | @Frequency 9.60e+9 Hz          |           |

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