

# Celazole<sup>®</sup> TU-60

## Unreinforced Melt Processable PBI

### Typical Properties

| PROPERTIES                                  | ASTM METHOD | ENGLISH VALUE                 | METRIC VALUE                |
|---|-------------|-------------------------------|-----------------------------|
| <b>MECHANICAL</b>                           |             |                               |                             |
| Tensile Strength                            | D-638       | 14.5 kpsi                     | 100 MPa                     |
| Modulus                                     |             | 730 kpsi                      | 5000 MPa                    |
| Elongation                                  |             | 2.2 %                         | 2.2 %                       |
| Flexural Strength                           | D-790       | 22.5 kpsi                     | 155 MPa                     |
| Modulus                                     |             | 700 kpsi                      | 4800 MPa                    |
| Compressive Strength                        | D-695       | 30 kpsi                       | 206 MPa                     |
| Modulus                                     |             | 430 kpsi                      | 2900 MPa                    |
| <b>THERMAL</b>                              |             |                               |                             |
| Coefficient of Linear Thermal Expansion     |             |                               |                             |
| 75-300°F                                    | TMA         | 19 X 10 <sup>-6</sup> in/in°F | 34 μm/m°C                   |
| 390-570°F                                   | TMA         | 39 X 10 <sup>-6</sup> in/in°F | 70 μm/m°C                   |
| Temperature of Initial (5%) Weight Loss In: |             |                               |                             |
| Air   | TGA         | 930°F                         | 499°C                       |
| Nitrogen                                    | TGA         | 930°F                         | 499°C                       |
| <b>ELECTRICAL</b>                           |             |                               |                             |
| Dielectric Strength                         | D-149       | 433 V/mil                     | 17KV/mm                     |
| Volume Resistivity                          | D-257       | 2 X 10 <sup>16</sup> ohm-cm   | 2 X 10 <sup>16</sup> ohm-cm |
| Dissipation Factor                          |             |                               |                             |
| 1 kHz                                       | D-150       | 0.000                         | 0.000                       |
| 10 kHz                                      | D-150       | 0.001                         | 0.001                       |
| Dielectric Constant                         |             |                               |                             |
| 1 kHz                                       | D-150       | 3.4                           | 3.4                         |
| 10 kHz                                      | D-150       | 3.4                           | 3.4                         |
| Arc Resistance                              | D-495       | 135 seconds                   | 135 seconds                 |
| <b>OTHER</b>                                |             |                               |                             |
| Water Absorption                            |             |                               |                             |
| @ Equilibrium                               | D-570       | 6.5%                          | 6.5%                        |
| Specific Gravity                            |             | 1.3                           | 1.3                         |
| Hardness, Rockwell A                        | D-785       | 25                            | 25                          |

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