

## Technical Data Sheet

### SustaPEI - ASTM

PEI

#### Typical characteristics

- High stiffness even at high temperatures
- Low smoke development
- Good resistance against high energy radiation

#### Typical industries

- Aerospace
- Electrical Industry
- Healthcare
- Semiconductor Wafer Handling
- Semiconductor High and low temperature
- Semiconductor Back-End applications

|                                  | Test method | Unit                | Guideline value |
|----------------------------------|-------------|---------------------|-----------------|
| <b>General properties</b>        |             |                     |                 |
| Density                          | ASTM D792   | g / cm <sup>3</sup> | 1.27            |
| Water Absorption 24 hours        | ASTM D570   | %                   | 0.25            |
| Dissipation Factor               | ASTM D150   | 1MHz                | 0.001           |
| Water Absorption Saturation      | ASTM D570   | %                   | 1.25            |
| <b>Mechanical properties</b>     |             |                     |                 |
| Hardness                         | ASTM D2240  | Shore D             | 86              |
| Tensile Strength at yield 73°F   | ASTM D638   | psi                 | 16700           |
| Tensile Modulus                  | ASTM D638   | psi                 | 480000          |
| Elongation at Break              | ASTM D638   | %                   | 60*             |
| Flexural Strength                | ASTM D790   | psi                 | 20000           |
| Flexural Modulus                 | ASTM D790   | psi                 | 500000          |
| Compressive Strength             | ASTM D695   | psi                 | 22000           |
| Rockwell Hardness                | ASTM D785   |                     | 114             |
| Rockwell Hardness                | ASTM D785   | R                   | 123             |
| Shear Strength                   | ASTM D732   | psi                 | 15000           |
| Izod Impact, Notched             | ASTM D256   | ft-lb/in            | 0.6             |
| Coefficient of Friction, Dynamic |             |                     | 0.2             |

[ri-inquiry@roechling.com](mailto:ri-inquiry@roechling.com) • [www.roechling.com/industrial/materials](http://www.roechling.com/industrial/materials)



|   | Test method | Unit                       | Guideline value   |
|---|-------------|----------------------------|-------------------|
| <b>Thermal properties</b>                 |             |                            |                   |
| Thermal Conductivity                      |             | in/hr/ft <sup>2</sup> /°F  | 1                 |
| Coefficient of Linear Thermal Expansion   | ASTM D696   | in/in/°F x10 <sup>-5</sup> | 3.1               |
| Melting Point                             | ASTM D789   | °F                         | 460               |
| Continuous Service Temperature, Air       |             | °F                         | 340               |
| Deflection Temperature at 1.8Mpa (264psi) | ASTM D648   | °F                         | 395               |
| Deflection Temperature at 1.8Mpa (66psi)  | ASTM D648   | °F                         | 405               |
| Flammability, UL94                        |             | 1/8 inch                   | V-0               |
| <b>Electrical properties</b>              |             |                            |                   |
| Dielectric constant                       | ASTM D150   | 1MHz                       | 3.2               |
| Dielectric strength                       | ASTM D149   | V/mil                      | 830               |
| Surface resistivity                       | ASTM D257   | Ω/cm                       | >10 <sup>13</sup> |
| <b>Compliance properties</b>              |             |                            |                   |
| FDA                                       |             |                            | Yes               |
| NSF                                       |             |                            | No                |
| USDA                                      |             |                            | Yes               |

The data stated above are average values ascertained by statistical tests on a regular basis. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

\*These are the typical value of the resin tested by Sabic, and results from semi-finished goods would have to be run and results could vary.

[ri-inquiry@roechling.com](mailto:ri-inquiry@roechling.com) • [www.roechling.com/industrial/materials](http://www.roechling.com/industrial/materials)

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Page 2 / 2 (Dates in DD/MM/YYYY)

