



# APTEK LABORATORIES, INC.

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## TECHNICAL DATA & INFORMATION

### DI-STRATE™ Tiles

Custom-designed, dielectric syntactic foam substrates.

### DESCRIPTION

**DI-STRATE** tiles are fully-crosslinked, low density, composite foam substrates which exhibit a low dielectric constant and low loss tangent characteristics in the microwave frequency range.

**DI-STRATE** tiles are low outgassing for outer space environments and can survive a wide temperature range without degradation.

### TYPICAL PROPERTIES

| <u>Property</u>   | <u>Value</u>                              |
|---|---|
| Dielectric Constant @ 2GHz                                | 1.50 - 2.01                               |
| Loss Tangent @ 2GHz                                       | ≤ 0.006                                   |
| Specific Gravity, g/cc                                    | 0.25 -0.90                                |
| Compressive Strength, psi                                 | > 300                                     |
| Coefficient of thermal expansion,<br>in/in/°C             | 18x10 <sup>-6</sup><br>( @ 0.27 sp. gr.)  |
| Outgassing per ASTM E-595<br>CVCM                         | Total mass loss < 1.0%<br>< 0.1%          |
| Operating temperature range<br>in vacuum<br>in atmosphere | -70°C to +200°C<br>-70°C to +80°C         |
| Machinability   | Excellent                                 |
| Tile Dimensions, inches<br>length<br>width<br>thickness   | 1.0 - 13.0<br>1.0 - 13.0<br>0.100 - 0.750 |

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