

PRODUCT : P<sup>2</sup>SI® 635LM RTM RESIN

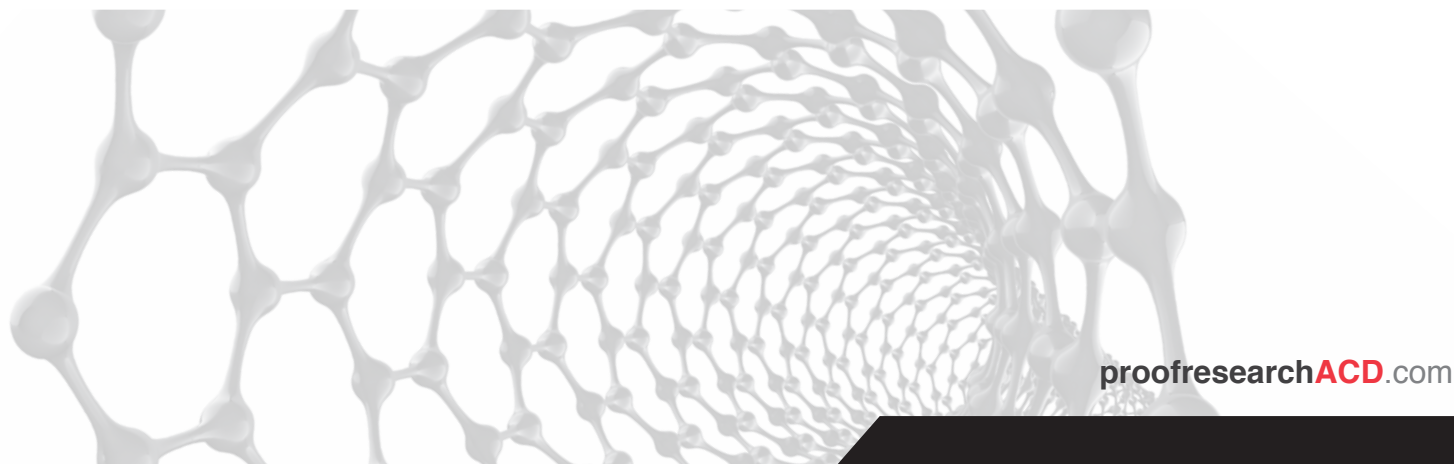
P<sup>2</sup>SI® 635LM provides a unique balance of thermal stability, resin infusion processability, mechanical performance, and affordability. P<sup>2</sup>SI® 635LM offers significant versatility compared to competitive products in the marketplace, including a high-use temperature (up to 550°F continuous), low-melt viscosity, large processing window, and flexible cure behavior. Cure cycles range from 600°F/4h with a post cure to 700°F/1h without a post cure. The ability to be cured for short times or lower temperatures is amenable to both cure temperature restrictions and component production schedules. P<sup>2</sup>SI® 635LM exhibits good thermo-oxidative stability, mechanical performance, and flexibility, making it one of the most versatile new materials we offer. P<sup>2</sup>SI® 635LM is available as a PMR-type prepreg or as a melt-processable solid.

**RHEOLOGICAL PROPERTIES**

| PROPERTY                                       | VALUE     |
|--|-----------|
| Softening Temperature, °F (°C)                 | 279 (137) |
| Cure Exotherm Temperature, °F (°C)             | 621 (327) |
| Processing Window (Δ), °F (°C)                 | 342 (190) |
| <b>Minimum Dynamic Viscosity, Poise</b>        |           |
| 626°F (330°C)                                  | 3         |
| <b>Pot Life at Temperature, h</b>              |           |
| 500°F (260°C)                                  | 2         |
| 536°F (280°C)                                  | 2         |
| 572°F (300°C)                                  | 1         |
| <b>Maximum Viscosity at Temperature, Poise</b> |           |
| 500°F (260°C)                                  | 60        |
| 536°F (280°C)                                  | 50        |
| 572°F (300°C)                                  | 40        |

**RESIN PROPERTIES**

| PROPERTY                              | NEAT RESIN | T650-35 8HS/UC309 | 16781 S-2 GLASS | TEST METHOD |
|---------------------------------------|------------|-------------------|-----------------|-------------|
| Glass Transition Temperature, °F (°C) | 635 (335)  | —                 | —               | ASTM D3418  |
| Glass Transition Temperature, °F (°C) |            |                   |                 | ASTM D7028  |
| Storage Modulus, E'                   | —          | —                 | 628 (331)       |             |
| Loss Modulus, E''                     | —          | —                 | 682 (361)       |             |
| tanδ                                  | —          | —                 | 694 (368)       |             |
| Maximum Moisture Gain, 8-ply, %       | —          | 1.03              | —               | ASTM D5229  |
| Thermo-Oxidative Mass Loss, %         |            |                   |                 | —           |
| 600°F (316°C) / 100h                  | —          | 0.51              | 0.73            |             |
| 550°F 288°C) / 646h                   | —          | 0.45              | —               |             |



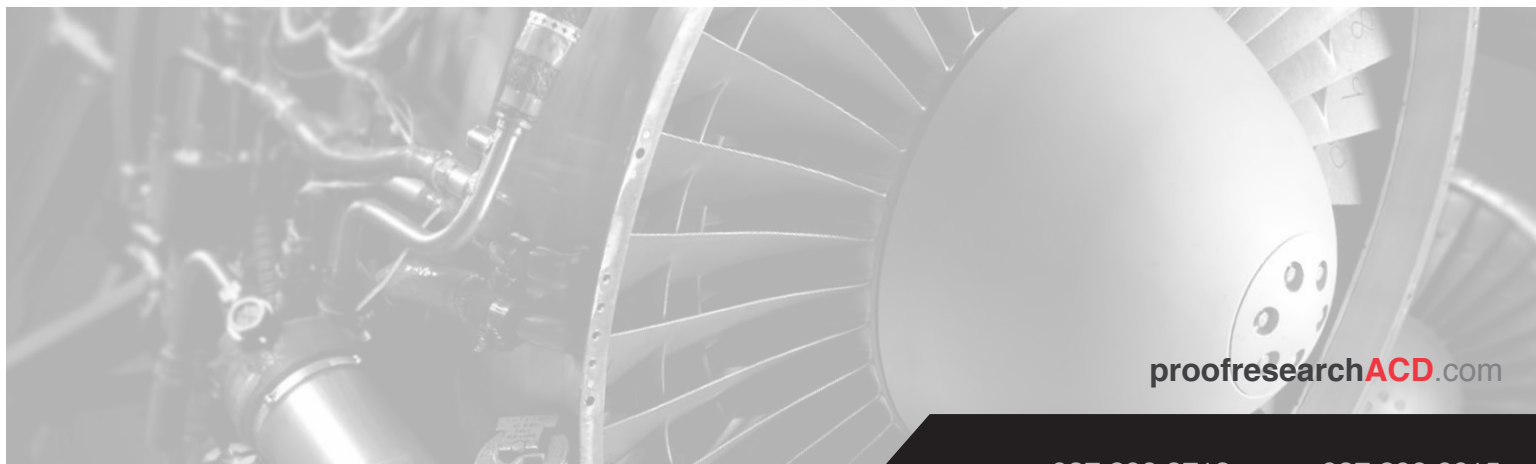
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**TYPICAL MECHANICAL PROPERTIES FOR TEXTILE COMPOSITE LAMINATES**

| PROPERTY  | T650-35 8HS/UC309  | 16781 S-2 GLASS   | TEST METHOD       |
|---|--------------------|-------------------|-------------------|
| <b>THREE-POINT FLEXURAL STRENGTH, ksi (MPa)</b> |                    |                   | <b>ASTM D790</b>  |
| 75°F 23°C                                       | <b>136 (938)</b>   | <b>127 (876)</b>  |                   |
| <b>Aging: 600°F (316°C) / 100h</b>              |                    |                   |                   |
| 75°F 23°C                                       | <b>116 (800)</b>   | —                 |                   |
| <b>Aging: 550°F (288°C) / 646h</b>              |                    |                   |                   |
| 75°F 23°C                                       | <b>109 (752)</b>   | —                 |                   |
| 550°F 288°C                                     | <b>90 (621)</b>    | —                 |                   |
| <b>Aging: Moisture Saturated</b>                |                    |                   |                   |
| 75°F 23°C                                       | <b>101 (694)</b>   | —                 |                   |
| 550°F 288°C                                     | <b>70 (483)</b>    | —                 |                   |
| <b>INTERLAMINAR SHEAR STRENGTH, ksi (MPa)</b>   |                    |                   | <b>ASTM D2344</b> |
| 75°F 23°C                                       | <b>12.1 (83.4)</b> | <b>9.8 (67.6)</b> |                   |
| <b>Aging: 600°F (316°C) / 100h</b>              |                    |                   |                   |
| 75°F 23°C                                       | <b>10.3 (71.0)</b> | —                 |                   |
| <b>Aging: 550°F (288°C) / 646h</b>              |                    |                   |                   |
| 75°F 23°C                                       | <b>6.3 (43.4)</b>  | —                 |                   |
| 550°F 288°C                                     | <b>6.0 (41.4)</b>  | —                 |                   |
| <b>Aging: Moisture Saturated</b>                |                    |                   |                   |
| 75°F 23°C                                       | <b>6.8 (46.9)</b>  | —                 |                   |
| 550°F 288°C                                     | <b>5.3 (36.5)</b>  | —                 |                   |

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