

Polystrand™ Material Cards

Avient offers material cards for Polystrand™ IE 6536 and IE 6337 polypropylene-based, E-glass continuous fiber-reinforced thermoplastic unidirectional (UD) tapes. These cards provide a comprehensive dataset to support simulation-driven design and manufacturing. Developed in collaboration with Simutence - Digital Composites Engineering, Polystrand datasets work within Simutence simulation software (SimuQuick, SimuWarp and SimuDrape) and finite element analysis (FEA) platforms such as Abaqus.

Accelerate Digital Product Development

Polystrand material cards help manufacturers reduce traditional product development costs through early-stage material evaluation and benchmarking. Development teams can accelerate material selection, shorten prototyping cycles and bring structural composite components to market faster.

The datasets include:

- **Forming behavior** — process-level data for accurate composite forming simulation
- **Thermokinetic data** — crystallization and solidification behavior for warpage prediction
- **Thermomechanical data** — viscoelastic and thermal strains for warpage and residual stress prediction including the consideration of thermokinetics
- **Structural data** — mechanical performance properties and load requirements

Who Polystrand Material Cards Support

Polystrand material cards support structural component manufacturers in transportation, automotive and other industries seeking to reduce weight while maintaining strength and impact resistance.

Key audiences include:

- Original equipment manufacturers (OEMs)
- Tier manufacturers
- Material specialists
- Design and structural engineers

Material cards and simulation results are intended as engineering tools only. Actual performance may vary based on product design, processing conditions, operating environment and other factors. Users are responsible for validating simulation results and determining suitability for their specific applications.

Ready to streamline your material selection?
Contact us at contact@avient.com
to request Polystrand material cards for
your next simulation project.

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