

STRENGTH + LIGHTWEIGHTING

INDUSTRIAL FAN MANUFACTURER

AXIAL FAN BLADE

AVIENT SOLUTION

Complēt™ Long Fiber Reinforced Thermoplastic

WHY AVIENT?

- Redesigned the 1600mm blade utilizing 3D modeling and mold flow analysis services from Avient Design
- Simulated mechanical load to determine which new design would provide optimal performance
- Increased strength using a carbon fiber grade, enabling injection-moldable parts and streamlined production
- Reduced blade thickness to 35% of the original and blade weight from 7.71 lbs to 1.76 lbs (77% decrease)
- Improved overall efficiency of fan with a thinner, lighter blade that cuts through the air

LEARN MORE

KEY REQUIREMENTS

- Replace aluminium alloy
- Reduce thickness and weight of fan blade
- Withstand 920 Pa of static pressure, high relative humidity (90-95%), and max temperature of 104°F