

» PRODUCT BULLETIN

Complēt™ PKE Formulations

Complēt™ PKE formulations are long glass fiber reinforced polyketone solutions for structural applications using metal today. These materials are semi-crystalline and deliver excellent chemical resistance, low moisture uptake, and dimensional stability similar to nylon (PA6 and PA66). They also offer over 2x higher impact properties than short fiber reinforced solutions, while maintaining impact properties in cold and demanding environments.

Helping to improve sustainability over the end-product lifecycle, Complēt PKE formulations offer a reduced carbon footprint as a result of the base resin. Producing polyketone results in 61% less carbon dioxide (CO₂) than PA66 and 46% less than PA6.

Grades are available in black and natural with 30%–50% long glass fiber, with or without a flame retardant, allowing customers to customize performance requirements for structural applications.

KEY CHARACTERISTICS

- Chemical resistance
- Maintaining high impact performance at low temperatures
- Low moisture uptake
- Dimensional stability comparable to nylon
- Higher impact resistance than short fiber alternatives
- Eco-conscious alternative to nylons
- More cost-effective solution than specialty nylons
- Available with a UL 94 V-0 flame rating (1.5 mm)

MARKETS & APPLICATIONS

These materials are for use in applications traditionally made of metal requiring moisture, chemical and cold impact performance requirements, including:

- **Industrial** – pipes, tubing, fluid management
- **Electrical & Electronics** – connectors, battery components, battery housings
- **Transportation** – under-the-hood fuel/chemical contact components, non-structural interior components
- **Oil & Gas**

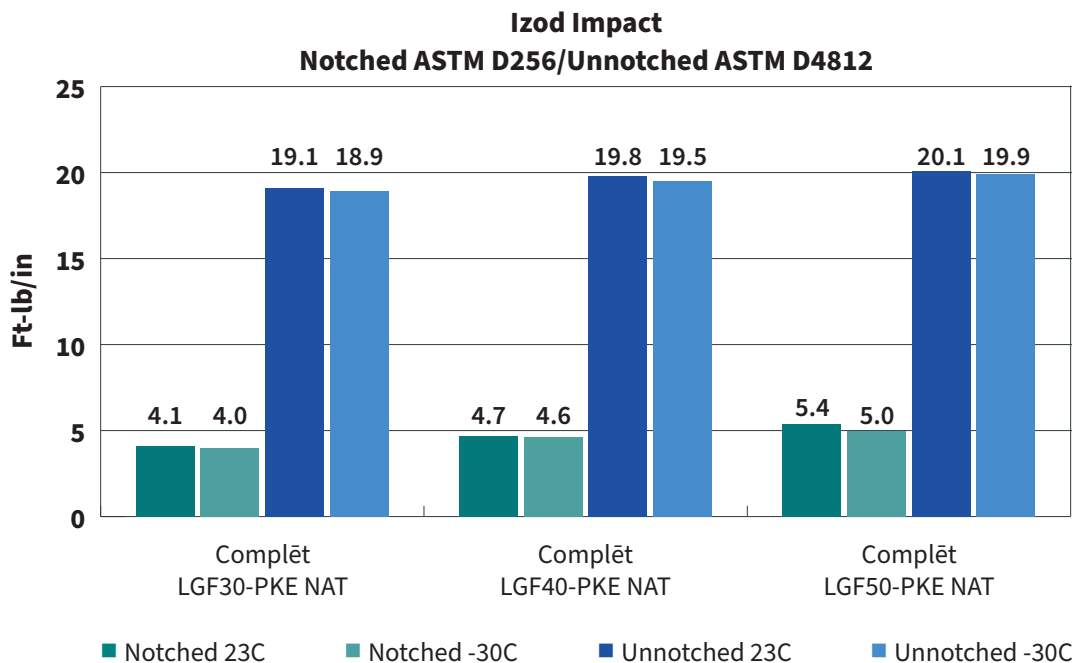
TECHNICAL PROPERTIES ⁽¹⁾	TEST METHOD	Complēt LGF30-PKE NAT	Complēt LGF40-PKE NAT	Complēt LGF50-PKE NAT
Physical				
Density/Specific Gravity	ASTM D792	1.47	1.54	1.66
Mechanical				
Tensile Strength (Yield)	ASTM D638	21,100 psi	24,700 psi	26,400 psi
Tensile Modulus ⁽²⁾	ASTM D638	1,150,000 psi	1,570,000 psi	2,150,000 psi
Flexural Modulus ⁽³⁾	ASTM D790	1,120,000 psi	1,480,000 psi	2,030,000 psi
Flammability (available option)				
Flame Rating @ 1.5 mm	UL 94	V-0	V-0	—

(1) Data based on single lot of lab generated samples. Values are not to be construed as specifications.

(2) 0.20 in/min

(3) 0.05 in/min

COLD IMPACT PERFORMANCE



Data based on single lot of lab-generated samples. Values are not to be construed as specifications.

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