



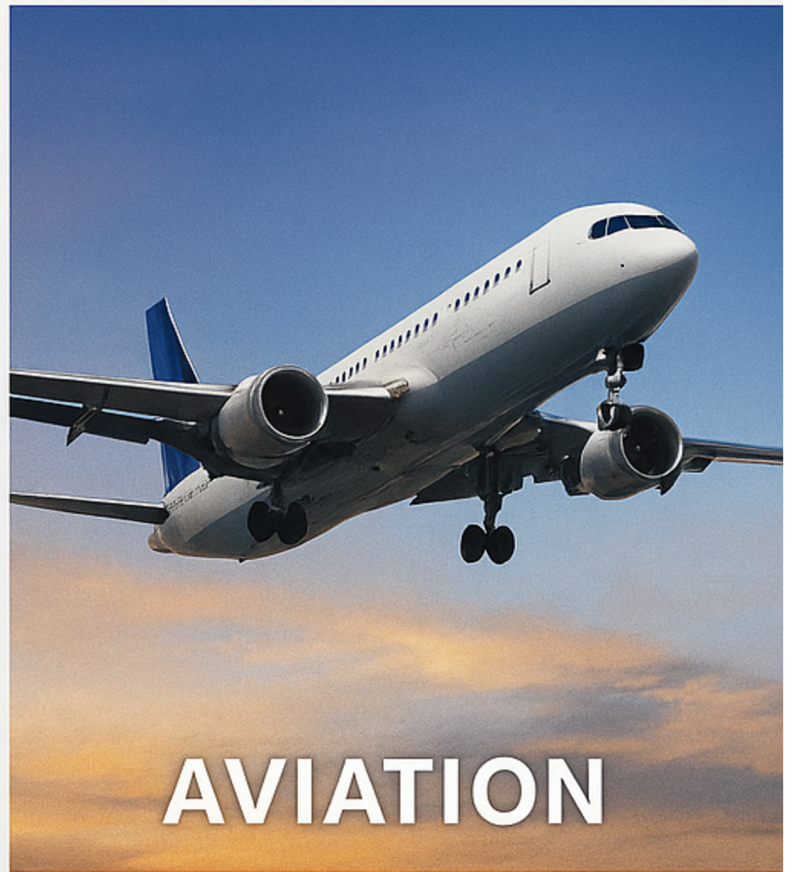
Agyl XPI™

Extruded Thermoplastic Polyimide

 **Pelican Wire**



AEROSPACE



AVIATION



UAV



ROBOTICS

Extrudable Polyimide Insulation for Aviation, Aerospace & Vacuum Applications

Agyl XPI™ is an extrudable aromatic polyimide insulation platform developed to address the limitations of traditional wrapped polyimide tape constructions in high-reliability aerospace and spaceflight applications. Unlike tape-based systems that rely on spiral wrapping and adhesive bonding, **Agyl XPI™ utilizes a true extrusion process to form a seamless, monolithic insulation layer around the conductor.**

While wrapped polyimide tape has long been used in aerospace wiring, it introduces seams and interfaces that may present reliability concerns in extreme environments.

Common limitations include potential delamination, reliance on adhesive systems, variability in wall thickness, and increased manufacturing variability. This is particularly relevant in vacuum and long-duration mission profiles.

Unlike FEP and PFA, the extruded polyimide construction significantly reduces polymer vapor outgassing, preserving performance in vacuum and contamination-sensitive applications.

Agyl XPI™ is produced using a controlled extrusion process that forms a continuous polyimide insulation layer directly over the conductor. This eliminates seams, overlaps, and adhesive bond lines, resulting in improved dimensional consistency and insulation integrity.

Performance Attribute	Kapton® Tape (Spiral Wrapped)	Extrudable Polyimide (Agyl XPI)
Continuous Temperature Rating	260°C / 500°F	316°C / 600°F
Short-Term Temperature Exposure	316°C / 600°F	350°C / 662°F
Construction Method	Spiral wrap (adhesive bonded at seams)	Seamless, extruded design
Thermal Limiting Factor	Adhesive defines temperature limits	Outstanding thermal aging stability
Durability Over Time	Susceptible to degradation & delamination	Maintains full material capabilities
Wall/Insulation Consistency	Tape overlap causes wall variability	Uniform coverage at 5–8 mils
Strip-ability	Tape layers difficult to strip	Excellent strip-ability



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SUMMARY

Agyl XPI™ represents an evolution in polyimide insulation technology, combining high-temperature capability with the reliability benefits of an extruded, monolithic construction. For detailed specs and product availability information, please contact sales@pelicanwire.com or call (239) 597-8555

**Pelican Wire Mfg.
Capabilities Video**



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