



Duratron® T5030 PAI

Printed Circuit Board

Challenge

Insulate metallic fasteners from Printed Circuit Boards

In control systems, printed circuit boards (PCB) are stacked together. The metallic fasteners used within the stacks have to be insulated and also be prevented from causing damage to the PCB's. These systems are expected to have a long service life. Therefore, the stack system must be able to resist creep and fatigue but also remain secure. Ceramic spacers are an option but can be brittle when subjected to vibration or fatigue.

Key Requirements

- High compressive strength
- Creep resistance at elevated temperatures
- Dimensional stability from -40 to 130 °C (-40 to 266 °F)
- Excellent fatigue resistance
- Good electrical insulation



Customer Benefits

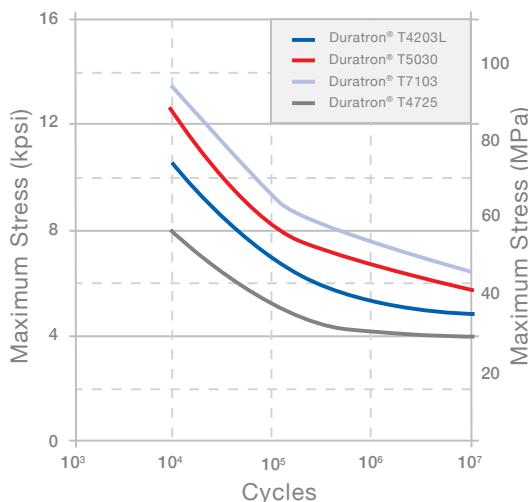
- Extended maintenance periods
- Reduced initial cost compared to ceramics
- A component that is non cracking
- Fire retardant capabilities as per FAR 25.853
- Low coefficient of linear thermal expansion
- High ozone resistance



Why Duratron® T5030?

This advanced 30% glass-reinforced PAI material (polyamide-imide) offers higher stiffness and creep resistance at elevated temperatures than other high temperature polymers such as PEEK or PEI. It is well suited for structural applications supporting static loads or fasteners for long periods of time and over a wide range of temperatures. It offers excellent electrical insulating properties as well as resistance to vibrations and fatigue. It is an extremely popular material traditionally used within the electronic / electrical and semiconductor industries, as well as aircraft and aerospace industries

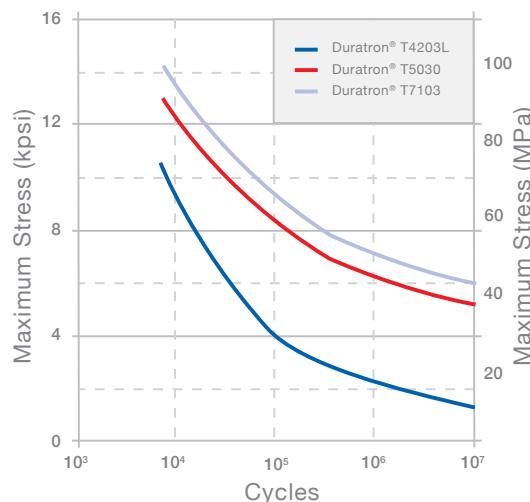
Flexural Fatigue Strength at 23°C, 30Hz.



Mitsubishi Chemical Advanced Materials Added Value

- Our global experience and quality in manufacturing engineering polymer shapes, combined with our highly developed machining capabilities
- Comprehensive AS9100D compliant portfolio of stock shapes
- Dedicated technical support
- Global availability of products and services through a strong network of material and development specialists from the initially singular machined parts up to in high quantity machined pre-shapes, which enabled cost savings by 60%

Flexural Fatigue Strength at 177°C, 30Hz.



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