



MITSUBISHI CHEMICAL
ADVANCED MATERIALS

Ketron® MD PEEK

Globally Compliant & Multi-Detectable Thermoplastic Material

Ketron® MD PEEK is a multi-detectable polyetheretherketone thermoplastic polymer developed for extreme environments within the Food Processing Industry. It offers extreme dimensional stability, high strength, and high temperature resistance.



Competitive Advantage

Ketron® MD improves the contamination detectability process in foodstuffs with superior detectability while also enhancing efficiency, safety, MTBR and product integrity by eliminating expensive recalls.

Detectability



Visual



Metal



X-Ray

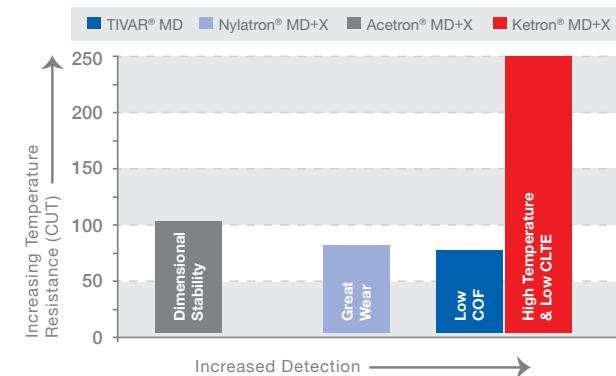
Key Benefits

- Impact resistant
 - Charpy notched (at least 3.0 kJ/m²)
- An ideal choice for elevated temperature applications with a continuous use temperature up to 482°F (250°C)
- Low CLTE of 45 x10⁻⁶– m/(m.K) below 100°C
- Heat Deflection Temperature of 150°C at 1.8MPa
- Food contact safe: FDA, full REACH & EU 10/2011 compliant

Compliance Properties for Food Processing

	TIVAR® MD	Nylatron® MD	Acetron® MD	Ketron® MD
Base Polymer	UHMW-PE	PA 6	POM-C	PEEK
DoC 1935/2004 per EU 10/2011	✓	✓	✓	✓
FDA	✓	✓	✓	✓
REACH	✓	✓	✓	✓

Metal & X-Ray Detection & Thermal Properties



* DISCLAIMER: Must be tested in actual environment with actual machines



Common Applications

- Pistons
- Manifolds
- Valves
- Extrusion dies for dough / meat application
- Hot oil / oven applications
- High heat mixing vessels
 - Cereal (pelletizers)
 - Candy (liquifier)
 - Baby food
 - Cooked food processing (mixers, and process vessels)

Availability

Rod(s)

- 30mm – 120mm diameter

Standard Stock

- 25, 50, 100 x 3000mm

Plate

- 10mm – 150mm thick

Standard Stock

- 25, 50mm x 615 x 3000mm



Other MD Family Materials

- TIVAR® MD UHMW-PE
- Nylatron® MD PA6
- Acetron® MD POM-C

Comparison of Critical Properties for Food Processing

Properties	ISO Test Method	ASTM Test Method	TIVAR® MD	Nylatron® MD	Acetron® MD	Ketron® MD
Density (Specific Gravity)	ISO 11-83-1	ASTM D792	1.01 g/cm (0.954)	1.21 g/cm (1.25)	1.46 g/cm (1.47)	1.44 g/cm (1.45)
CLTE, Average Value Between 23°C (73°F) and 100°C (212°F)	-	ASTM E831	200 x 10 ⁻⁶ (110 µin/in-°F)	100 x 10 ⁻⁶ (50 µin/in-°F)	130 x 10 ⁻⁶ (71 µin/in-°F)	45 x 10 ⁻⁶ (25 µin/in-°F)
HDT at 1.8 MPa (264 psi)	ISO 75	ASTM D648	42°C (116°F)	85°C (200°F)	100°C (280°F)	Not Tested (320°F)
CUT (20,000 hrs)	-	-	80°C (176°F)	85°C (185°F)	105°C (221°F)	250°C (482°F)
Relative Cost	-	-	€ € € (\$ \$\$)	€ € € € (\$ \$\$ \$)	€ € € € € (\$ \$\$ \$\$ \$)	

* Tested under free fall conditions, vertical ring Metal Detector

- Strong Advantage

- Best in Class

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