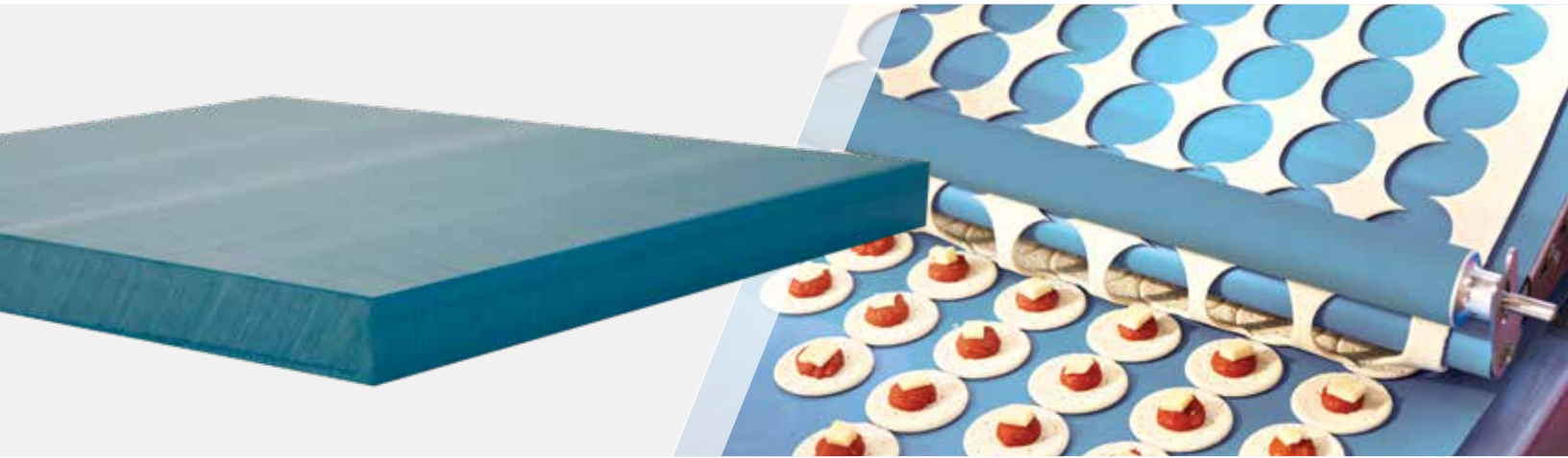


Acetron[®] MD POM-C

Acetron[®] MD offers a unique combination of excellent mechanical strength, impact strength, and stiffness. This FDA / EU compliant material can be easily traced by conventional metal detection systems installed to detect the contamination of foodstuffs.*

**Results may vary depending on the sensitivity of the metal detection system used.



Competitive Advantage

Acetron[®] MD has gained popularity in today's conventional metal detection systems market, improving the contamination detectability process in foodstuffs with superior multi-detectable features: visual, metal and x-ray. Acetron[®] MD has been successfully used in meat and poultry processing, dairy and cheese production as well as meeting the various needs within the medical and pharmaceutical production environments.

Key Benefits

- Formulated for use with existing metal detection units
- Wear resistant
- High dimensional stability
- Same good chemical resistance as other POM materials
- Good bearing performance in wet and dry environments
- An ideal choice for elevated temperature applications with a continuous use temperature up to 221°F (105°C)
- Food contact safe: FDA and EU 10/2011 compliant

Common Applications

- Bearings / bushings
- Scraper blades
- Conveyor wear surfaces
- Change parts
- Timing screws
- Star wheels

Other MD Family Materials

- TIVAR[®] MD UHMW-PE
- Nylatron[®] MD PA6
- Ketron[®] MD PEEK



Data Sheet

		Metric		Imperial	
		Test Method ISO	Typical Average Value	Test Method ASTM	Typical Average Value
Mechanical Properties	Density (Specific Gravity @ 73°F)	ISO 1183-1	1.46 g/cm ³	ASTM D792	1.47
	Tensile Strength @ 23°C (73°F)	ISO 527-1/-2	66 MPa	ASTM D638	9,000 psi
	Tensile Modulus of Elasticity @ 23°C (73°F)	ISO 527-1/-2	2950 MPa	ASTM D638	415,000 psi
	Tensile Elongation (at break) @ 23°C (73°F)	ISO 527-1/-2	15%	ASTM D638	15%
	Flexural Strength @ 23°C (73°F)	ISO 178	93 MPa	ASTM D790	12,000 psi
	Flexural Modulus of Elasticity @ 23°C (73°F)	ISO 178	2800 MPa	ASTM D790	400,600 psi
	Shear Strength @ 23°C (73°F)	N/A	N/A	ASTM D732	8,000 psi
	Compressive Stress / Strength @ 23°C (73°F)	ISO 604	25 / 44 / 7 MPa (1 / 2 / 5% Normal Strain)	ASTM D695	13,200 psi (10% Deformation)
	Compressive Modulus of Elasticity @ 23°C (73°F)	ISO 604	-	ASTM D695	270,000 psi
	Hardness, Rockwell, Scale as Noted @ 23°C (73°F)	ISO 2039-2	M86	ASTM D785	M89 (R121)
	Hardness, Durometer, Shore "D" Scale @ 23°C (73°F)	ISO 868	D80	ASTM D2240	D85
	Charpy impact strength, Unnotched @ 23°C (73°F)	ISO 179-1/1eU	70 kJ/m ²	N/A	N/A
	Charpy impact strength, Notched @ 23°C (73°F)	ISO 179-1/1eA	5 kJ/m ²	ASTM D25 6 Type "A"	0.8 ft. lb./in.
	Coefficient of Friction – (Dry vs. Steel) Dynamic	ISO 7148-2	0.3-0.45	MCAM TM 55007	0.3
	Limiting PV with 4:1 safety factor applied	-	-	MCAM TM 55007	4,000 ft. lb., in. ² - min
Wear Factor	ISO 7148-2	45 µm/km	MCAM TM 55010	400 in. ³ min/ft. lbs. hr.	
Thermal Prop.	Coefficient of Linear Thermal Expansion 23-6 °C (-40°F to 300°F)	ASTM E831 (TMA)	115 x 10 ⁻⁶ m/(m.K)	ASTM E831 (TMA)	7.1 x 10 ⁻⁵ in./in./°F
	Heat Deflection Temperature @ 1.8 MPa (264 psi)	ISO 75 -1/-2	100°C	ASTM D648	280°F
	Tg-Glass Transition (amorphous)	ISO 11357-1/-2	-	ASTM D3418	-
	Melting Point (crystalline) peak	ISO 11357-1/-3	165°C	ASTM D3418	340°F
	Continuous Service Temp in Air (Max.) ⁽¹⁾	-	90°C	-	180°F
	Thermal Conductivity	-	0.31 W/(K.m)	-	-
Electrical Prop.	Dielectric Strength (Short Term)	ISO 60243-1	0.31 W/(K.m)	ASTM D149	-
	Surface Resistivity	EOS/ESD S11.11	>10 ¹² ohm/sq	EOS/ESD S11.11	>10 ¹³ ohms/square
	Dielectric Constant, 10 ⁶ Hz	IEC 60250	-	ASTM D150	-
	Dissipation Factor, 10 ⁶ Hz	IEC 60250	-	ASTM D150	-
	Flammability @ 3.1mm (1/8 in.) ⁽²⁾	UL 94	HB	UL-94	HB
Other	Water Absorption Immersion, 24 Hours	ISO 62	0.78%	ASTM D570 ⁽³⁾	0.20% by wt.
	Water Absorption Immersion, Saturation	-	0.75%	ASTM D570 ⁽³⁾	-

(1) Data represents our estimated maximum long-term service temperature based on practical field experience. (2) Estimated rating based on available data. The UL-94 Test is a laboratory test and does not relate to actual fire hazard. Contact us for specific UL "Yellow Card" recognition number. (3) Specimens: 1/8" thick x 2" diameter or square.

Distributed by:



Email: info@polymershapes.com
 Call: 1 (866) 437-7427
www.polymershapes.com

All statements, technical information and recommendations contained in this publication are presented in good faith and are, as a rule, based upon tests and such tests are believed to be reliable and practical field experience. The reader, however, is cautioned, that Mitsubishi Chemical Advanced Materials does not guarantee the accuracy or completeness of this information and it is the customer's responsibility to determine the suitability of Mitsubishi Chemical Advanced Materials' products in any given application. Acetron, Nylatron, and TIVAR are a registered trademarks of the Mitsubishi Chemical Advanced Materials group of companies.

Design and content created by Mitsubishi Chemical Advanced Materials and are protected by copyright law. Copyright © Mitsubishi Chemical Advanced Materials. All rights reserved. MCM-FP-03D | 9.5.19

