Metal Detectable
Thermoplastic Material

SIMPLY NO SUBSTITUTE

Acetron® MD POM-C

Competitive Advantages

Quadrant Acetron® MD is a wear-resistant POM (acetal) that provides a unique combination of light weight, chemical resistance and ability to perform in moist/wet applications – while being fully metal detectable to >27mm^3. Quadrant Acetron® MD allows food processors and packagers to gain the efficiencies that polymer wear materials provide and while minimizing their investment. Quadrant Acetron® MD is detectable with existing equipment present in most processing lines. Quadrant has delivered a full line of metal detectable (MD) materials that meet the various needs within the food, medical and pharmaceutical production environment. Quadrant Acetron® MD has been successfully used in meat and poultry processing as well as dairy and cheese production.

Key Benefits

- FDA compliant
- Metal detectable to >27mm^3
- Wear resistant
- Same good chemical resistance as other POM materials
- Good bearing performance in wet and dry application environments
- An ideal choice for elevated temperature applications with maximum continuous operating temperature of 180˚ F

Common Applications

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

Other MD Family Materials:

- Quadrant TIVAR® MD UHMW-PE
- Quadrant Nylatron® MD PA6

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Data Sheet - Acetron® MD POM-C

	Property	Units	Test Method	Typical Average Value
Mechanical Properties	Specific Gravity, 73˚F	-	ASTM D792	1.47
	Tensile Strength, 73˚F	psi	ASTM D638	9,000
	Tensile Modulus of Elasticity, 73˚F	psi	ASTM D638	415,000
	Tensile Elongation (at break) 73˚F	%	ASTM D638	15
	Flexural Strength, 73˚F	psi	ASTM D790	12,000
	Flexural Modulus of Elasticity, 73˚F	psi	ASTM D790	400,600
	Shear Strength, 73˚F	psi	ASTM D732	8,000
	Compressive Strength, 10% Deformation, 73˚F	psi	ASTM D695	13,200
	Compressive Modulus of Elasticity, 73˚F	psi	ASTM D695	270,000
	Hardness, Rockwell, Scale as noted, 73˚F	-	ASTM D785	M89 (R121)
	Hardness, Durometer, Shore “D” Scale, 73˚F	-	ASTM D2240	D85
	Izod Impact (notched), 73˚F	ft. lb./in.	ASTM D256 Type “A”	0.8
	Coefficient of Friction (Dry vs Steel) Dynamic	-	QTM 55007	0.3
	Limiting PV (with 4:1 safety factor applied)	ft. lbs.in.^{2} min.	QTM 55007	4,000
	Wear Factor	in.^{3} min./ft.lbs.hr.	QTM 55010	400
Thermal Properties	Coefficient of Linear Thermal Expansion (-40˚F to 300˚F)	in./in./˚F	ASTM E-831 (TMA)	7.1 x 10^{-5}
	Heat Deflection Temperature 264 psi	˚F	ASTM D648	280
	Tg-Glass Transition (amorphous)	˚F	ASTM D3418	N/A
	Melting Point (crystalline) peak	˚F	ASTM D3418	340
	Continuous Service Temperature in Air (Max.) (1)	˚F	-	180
	Thermal Conductivity	BTU in/(hr.ft.^{2} ˚F)	-	N/A
Electrical Properties	Dielectric Strength, Short Term	Volts/mil	ASTM D149	N/A
	Surface Resistivity	ohms/square	EOS/ESD S11.11	≥ 10^{13}
	Dielectric Constant, 10^6 Hz	-	ASTM D150	N/A
	Dissipation Factor, 10^6 Hz	-	ASTM D150	N/A
	Flammability @3.1 mm (1/8 in.) (2)	-	UL 94	HB
Other	Water Absorption Immersion, 24 Hours	% by wt.	ASTM D 570(3)	0.20
	Water Absorption Immersion, Saturation	% by Wt.	ASTM D570(3)	-

(1) Data represents Quadrant’s 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 Quadrant for specific “Yellow Card” recognition number.

(3) Specimens 1/8” thick x 2” dia. or square.

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