

Acetron® Food Grade Blue 50 POM-C



Competitive Advantage

Acetron® Food Grade Blue 50 POM-C is compliant in both Europe and North America, which is one of the key competitive advantages that it offers to the Food Processing industry. For companies that are exporting, this is critical as they will now only need one material to meet the demands and requirements of both EU and NA. Blue in color for visual detection, increased food product safety, and proactive contamination prevention, Acetron® Food Grade Blue 50 POM-C is the most recent addition to Mitsubishi Chemical Advanced Materials' Dual Compliant offerings (FDA and EU Food Grade).

Common Applications

- Scrapers
- Knife Guides
- Portioning Knives
- Gears
- Sprockets
- Rollers
- Extrusion Dies
- Filling Nozzles
- Timing Screws

Other Dual Compliant Materials

Stock Shapes	DoC 1935/2004 acc. To (EU) 10/2011 Food Grade (1)	FDA Compliant (2)
Ketron® MD PEEK Blue	+	+
Nylatron® MD Blue	+	+
Acetron® MD Blue	+	+
TIVAR® HPV Blue	+	+

Key Benefits

- Blue in color for visual detection, increased food product safety, and proactive contamination prevention.
- FDA and EU Food Grade Compliant.
- High dimensional stability and wear-resistance.
- Possesses the same chemical resistance characteristics as other POM materials.
- Exceptional bearing performance in wet and dry environments.

Data Sheet

	Metric		Imperial		
	Test Method ISO	Typical Average Value	Test Method ASTM ⁽⁶⁾	Typical Average Value	
Mechanical Properties	Density (Specific Gravity @ 73°F)	ISO 1183-1	g/cm ³	ASTM D792	1.42
	Tensile Strength @ 23°C (73°F)	ISO 527-1/-2	MPa	ASTM D638	9000 psi
	Tensile Modulus of Elasticity @ 23°C (73°F)	ISO 527-1/-2	MPa	ASTM D638	430,000 psi
	Tensile Elongation (at break) @ 23°C (73°F)	ISO 527-1/-2	%	ASTM D638	60%
	Flexural Strength @ 23°C (73°F)	ISO 178	MPa	ASTM D790	12,000 psi
	Flexural Modulus of Elasticity @ 23°C (73°F)	ISO 178	MPa	ASTM D790	435,000 psi
	Shear Strength @ 23°C (73°F)	N/A	N/A	ASTM D732	7900 psi
	Compressive Stress / Strength @ 23°C (73°F)	ISO 604	MPa (1 / 2 / 5% Normal Strain)	ASTM D695	12,900 psi (10% Deformation)
	Compressive Modulus of Elasticity @ 23°C (73°F)	ISO 604	-	ASTM D695	280,000 psi
	Hardness, Rockwell, Scale as Noted @ 23°C (73°F)	ISO 2039-2	M	ASTM D785	M83 (R119)
	Hardness, Durometer, Shore "D" Scale @ 23°C (73°F)	ISO 868	D	ASTM D2240	D82
	Charpy impact strength, Unnotched @ 23°C (73°F)	ISO 179-1/1eU	kJ/m ²	N/A	N/A
	Charpy impact strength, Notched @ 23°C (73°F)	ISO 179-1/1eA	kJ/m ²	ASTM D25 6 Type "A"	1.22 ft. lb./in.
	Coefficient of Friction – (Dry vs. Steel) Dynamic	ISO 7148-2		MCAM TM 55007	
	Limiting PV with 4:1 safety factor applied	-	-	MCAM TM 55007	ft. lb., in. ² - min
Wear Factor	ISO 7148-2	µm/km	MCAM TM 55010	in. ³ min/ft. lbs. hr.	
Thermal Prop.	Coefficient of Linear Thermal Expansion 23-6 °C (-40°F to 300°F)	ASTM E831 (TMA)	x 10 ⁻⁶ m/(m.K)	ASTM E831 (TMA)	9.5 x 10 ⁻⁶ in./in./°F
	Heat Deflection Temperature @ 1.8 MPa (264 psi)	ISO 75 -1/-2	°C	ASTM D648	266 °F
	Tg-Glass Transition (amorphous)	ISO 11357-1/-2		ASTM D3418	
	Melting Point (crystalline) peak	ISO 11357-1/-3	°C	ASTM D3418	388 °F
	Continuous Service Temp in Air (Max.) ⁽³⁾	-	°C	-	°F
	Thermal Conductivity	-	W/(K.m)	-	-
Electrical Prop.	Dielectric Strength (Short Term)	ISO 60243-1	W/(K.m)	ASTM D149	
	Surface Resistivity	EOS/ESD S11.11	ohm/sq	EOS/ESD S11.11	ohm/sq
	Dielectric Constant, 10 ⁶ Hz	IEC 60250		ASTM D150	
	Dissipation Factor, 10 ⁶ Hz	IEC 60250		ASTM D150	
	Flammability @ 3.1mm (1/8 in.) ⁽⁴⁾	UL 94		UL-94	
Other	Water Absorption Immersion, 24 Hours	ISO 62	%	ASTM D570 ⁽⁵⁾	0.18 % by wt.
	Water Absorption Immersion, Saturation	-	%	ASTM D570 ⁽⁵⁾	0.74 % by wt.

(1) Food Grade: Mitsubishi Chemical Advanced Materials' European new "Food Grade" designated products comply with the requirements mentioned in the Regulation [EC] No 1935/2004 and the Regulation (EU) 10/2011. Further our "Food Grade" products are manufactured according to Good Manufacturing Practice [GMP] as set out in Regulation [EC] No 2023/2006. (2) This column gives the compliance of the raw materials used for the manufacture of the Mitsubishi Chemical Advanced Materials Stock Shapes with respect to their composition as set out in the United States of America (FDA) for plastic materials and articles intended to come into contact with foodstuffs.

(3) Data represents our estimated maximum long-term service temperature based on practical field experience. (4) 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. (5) Specimens: 1/8" thick x 2" diameter or square. (6) The ASTM data that is presented in the data sheet above is preliminary data, and is subject to change as more data is gathered.

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