

Quadrant EPP Ertacetal® C POM-C, extruded (ISO Data)

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, Unreinforced

Material Notes:

Ertacetal C is Quadrant's copolymer acetal grade. Next to the standard natural and black grades, there is also a series of special colours available all showing an FDA food contact compliant composition. The acetal copolymer is more resistant against hydrolysis, strong alkalis and thermal-oxidative degradation than the acetal homopolymer High mechanical strength, stiffness and hardness Excellent resilience Good creep resistance High impact strength, even at low temperatures Very good dimensional stability (low water absorption) Good sliding properties and wear resistance Excellent machinability Good electrical insulating and dielectric properties Physiologically inert (most grades are suitable for food contact) Not self-extinguishing

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Ertacetal-C-POM-C-extruded-ISO-Data.php

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.20 %	0.20 %	50% RH
Water Absorption at Saturation	0.80 %	0.80 %	
Outgassing - Total Mass Loss	0.34 %	0.34 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	84	84	ISO 2039-2
Hardness, Shore D	79	79	
Ball Indentation Hardness	140 MPa	20300 psi	ISO 2039-1
Tensile Strength	66.0 MPa	9570 psi	at Yield; ISO 527-1/-2
Elongation at Break	50 %	50 %	ISO 527-1/-2
Elongation at Yield	20 %	20 %	ISO 527-1/-2
Tensile Modulus	2.80 GPa	406 ksi	ISO 527-1/-2
Flexural Strength	91.0 MPa	13200 psi	
Flexural Modulus	2.66 GPa	386 ksi	
Compressive Strength	23.0 MPa	3340 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	40.0 MPa	5800 psi	ISO 604
	@Strain 2 %	@Strain 2 %	

Mechanical Properties	72.0 MPa Metric	10400 psi English	Comments ISO 604
	@Strain 5 %	@Strain 5 %	
K Factor (ISO)	45 µm/km	45 µm/km	
Charpy Impact Unnotched	NB	NB	ISO 179-1/1eU
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.30 - 0.45	0.30 - 0.45	
Limiting Pressure Velocity	0.100 MPa-m/sec	2860 psi-ft/min	at 1 m/s unlubricated
	0.160 MPa-m/sec	4570 psi-ft/min	at 0.1 m/s unlubricated

Thermal Properties	Metric	English	Comments
CTE, linear	125 µm/m-°C	69.4 µin/in-°F	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ft ² -°F	
Melting Point	165 °C	329 °F	DSC, 10°C/min.; ISO 11357-1/-3
Maximum Service Temperature, Air	100 °C	212 °F	Continuous; 20,000 h
	115 °C	239 °F	Continuous; 5,000 h
Deflection Temperature at 1.8 MPa (264 psi)	100 °C	212 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	
Oxygen Index	15 %	15 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.0e+14 ohm-cm	>= 1.0e+14 ohm-cm	IEC 60093
Surface Resistivity per Square	>= 1.0e+13 ohm	>= 1.0e+13 ohm	IEC 60093
Dielectric Constant	3.8	3.8	IEC 60250
	@Frequency >=100000 Hz	@Frequency >=100000 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	
Dissipation Factor	0.0030	0.0030	IEC 60250
	@Frequency 100000 Hz	@Frequency 100000 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Electrical Properties	Metric	English	Comments
Compliance Properties	Metric	English	Comments
3A-Dairy	Yes	Yes	Only natural
European Food 1935/2004	Yes	Yes	only natural
FDA	Yes	Yes	only natural
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Unacceptable	Unacceptable	
Acids, Weak	Limited	Limited	
Alcohols	Acceptable	Acceptable	
Alkalies, Strong (pH 11-14)	Acceptable	Acceptable	
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Limited	Limited	
Continuous Sunlight	Limited	Limited	
Hot Water / Steam	Limited	Limited	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Acceptable	Acceptable	

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