

Quadrant EPP Ertalyte® PET-P

Polyethylene Terephthalate

Quadrant Engineering Plastic Products

Message:

Quadrant EPP Ertalyte® PET-P is a Polyethylene Terephthalate (PET) product. It is available in Europe or North America. Applications of Quadrant EPP Ertalyte® PET-P include engineering/industrial parts, food contact applications, housings and sealing applications.

Characteristics include:

- Flame Rated
- Wear Resistant
- Chemical Resistant
- Corrosion Resistant
- Creep Resistant

General Information	
Features	Crystalline
	Good Abrasion Resistance
	Good Chemical Resistance
	Good Corrosion Resistance
	Good Creep Resistance
	Good Dimensional Stability
	Good Electrical Properties
	Good Wear Resistance
	Good Weather Resistance
	High Rigidity
	High Strength
	Low Moisture Absorption
	Radiation (Gamma) Resistant
Uses	Bearings
	Bushings
	Gears
	Housings
	Pump Parts
	Seals
	Thrust Washer
	Valves/Valve Parts
Agency Ratings	FDA 21 CFR 177.1630
Appearance	Black
	White
Forms	Rod

Physical	Nominal Value	Unit	Test Method
Density	1.39	g/cm ³	ISO 1183
Water Absorption			ISO 62
23°C, 24 hr	0.70	%	
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.25	%	
Water Absorption			ISO 62
23°C, 3.00 mm ¹	6.0	mg	
23°C, 3.00 mm ²	0.16	%	
23°C, 3.00 mm ³	13.0	mg	
Service Temperature - Minimum	-20	°C	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale, 10.0 mm)	96		ISO 2039-2
Ball Indentation Hardness (10.0 mm)	170	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ⁴	3700	MPa	ISO 527-2/1
Tensile Stress ⁵ (Yield)	90.0	MPa	ISO 527-2/20
Tensile Strain ⁶ (Break)	15	%	ISO 527-2/20
Tensile Creep Modulus (1000 hr)	26.0	MPa	ISO 899-1
Compressive Stress			ISO 604/1
5% Strain	103	MPa	
2% Strain	51.0	MPa	
1% Strain	26.0	MPa	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	2.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength	> 50	kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength ⁷	2.0	kJ/m ²	ISO 180/2A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁸ (1.8 MPa, Unannealed)	75.0	°C	ISO 75-2/A
Continuous Use Temperature			
-- ⁹	100	°C	
-- ¹⁰	115	°C	
-- ¹¹	160	°C	
Melting Temperature (DSC)	255	°C	
CLTE - Flow			
23 to 60°C	6.0E-5	cm/cm/°C	
23 to 100°C	8.0E-5	cm/cm/°C	
Thermal Conductivity (23°C)	0.29	W/m/K	
Electrical	Nominal Value	Unit	Test Method

Surface Resistivity ¹²	> 1.0E+14	ohms	IEC 60093
Volume Resistivity ¹³	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength ¹⁴ (1.00 mm)	22	kV/mm	IEC 60243-1
Relative Permittivity ¹⁵			IEC 60250
100 Hz	3.40		
1 MHz	3.20		
Dissipation Factor ¹⁶			IEC 60250
100 Hz	1.0E-3		
1 MHz	0.014		
Comparative Tracking Index ¹⁷	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
3.00 mm	HB		
6.00 mm	HB		
Oxygen Index	25	%	ISO 4589-2
NOTE			
1.	Weight, 24 hrs		
2.	96 hrs		
3.	Weight, 96 hrs		
4.	Conditioned at 23°C/50%RH		
5.	Conditioned at 23°C/50%RH		
6.	Conditioned at 23°C/ 50%RH		
7.	Conditioned at 23°C/50%RH		
8.	Dry		
9.	20000 hrs		
10.	5000 hrs		
11.	Short periods		
12.	Dry		
13.	Conditioned at 23°C/50%RH		
14.	Conditioned at 23°C/50%RH		
15.	Dry		
16.	Dry		
17.	Dry		

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