

Murtfeldt Murinyl® Polyvinylidene fluoride

Category : Polymer , Thermoplastic , Fluoropolymer , PVDF , Polyvinylidene fluoride (PVDF), Molded/Extruded

Material Notes:

As a fluorinated plastic, Murinyl® is exceptionally resistant to chemicals, hydrolysis, and sterilization. Its properties change very little at high service temperatures and after long-term exposure to UV radiation. This material is ideally suited for use in the food sector and medical industry. Special Properties: • Good wear resistance • Good rigidity • High compressive strength • High constant service temperature • Good resistance to chemicals • Resistant to sterilization • No stress corrosion possible • Very good resistance to UV rays and adverse weather conditions • No moisture absorption • Approved for use in the food industry (EU and FDA) Information provided by Murtfeldt Kunststoffe GmbH & Co. KG.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Murtfeldt-Murinyl-Polyvinylidene fluoride.php

Physical Properties	Metric	English	Comments
Density	1.79 g/cc	0.0647 lb/in³	ISO 1183-1
Moisture Absorption at Equilibrium	0.010 % @Temperature 23.0 °C	0.010 % @Temperature 73.4 °F	50% RH
Water Absorption at Saturation	0.050 % @Temperature 23.0 °C	0.050 % @Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	78	78	DIN 53505
Tensile Strength, Yield	50.0 MPa	7250 psi	ISO 527-1/-2
Creep Strength	10.0 MPa	1450 psi	stress leading to 1% elongation; ISO 899-1
Modulus of Elasticity	2.30 GPa	334 ksi	
Compressive Yield Strength	17.0 MPa @Strain 1.00 %	2470 psi @Strain 1.00 %	dry; ISO 604
	32.0 MPa @Strain 2.00 %	4640 psi @Strain 2.00 %	dry; ISO 604
Charpy Impact Unnotched	NB	NB	ISO 179
Charpy Impact, Notched	1.00 J/cm²	4.76 ft-lb/in²	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.35	0.35	
Sand Slurry	21	21	µm/km

Thermal Properties	Metric	English	Comments
CTE, linear	125 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	69.4 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 23.0 - 60.0 $^{\circ}\text{C}$	@Temperature 73.4 - 140 $^{\circ}\text{F}$	
	140 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	77.8 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 23.0 - 100 $^{\circ}\text{C}$	@Temperature 73.4 - 212 $^{\circ}\text{F}$	
Melting Point	175 $^{\circ}\text{C}$	347 $^{\circ}\text{F}$	ISO 11357-1
Maximum Service Temperature, Air	150 $^{\circ}\text{C}$	302 $^{\circ}\text{F}$	
	@Time 7.20e+7 sec	@Time 20000 hour	
	160 $^{\circ}\text{C}$	320 $^{\circ}\text{F}$	
	@Time <=86400 sec	@Time <=24.0 hour	
Minimum Service Temperature, Air	-50.0 $^{\circ}\text{C}$	-58.0 $^{\circ}\text{F}$	
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	IEC 60093
Dielectric Constant	6.0	6.0	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
	7.4	7.4	
	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60250
Dielectric Strength	18.0 kV/mm	457 kV/in	IEC 60243-1
Dielectric Loss Index	0.025	0.025	
	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60250
	0.165	0.165	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Color	Natural	

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