

Delrin® Stock Shapes AF DE588

Acetal (POM) Homopolymer

Ensinger Inc.

Message:

DELIN® AF DE588 is a 20% PTFE filled homopolymer acetal that is fully tested and certified for use by the United States Navy. The resin is manufactured by DuPont and is used extensively in a variety of applications primarily on submarines. This advanced acetal material uses a combination of PTFE fibers uniformly dispersed in Delrin acetal resin. The combination results in improved wear characteristics along with strength, toughness, dimensional stability and machinability. The profile also yeilds a material with superior load bearing capabilities, especially when operating at high speeds.

DELIN® DE588 is designed and approved specifically for naval applications and is suitable in a variety of uses such as bushings, bearings, seals, gaskets and valve seats.

General Information			
Filler / Reinforcement	PTFE Fiber,20% Filler by Weight		
Features	Good Dimensional Stability		
	Good Strength		
	Good Toughness		
	Good Wear Resistance		
	Homopolymer		
	Machinable		
Uses	Bearings		
	Bushings		
	Gaskets		
	Military Applications		
	Seals		
	Valves/Valve Parts		
Forms	Shapes		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.53	g/cm ³	ASTM D792
Water Absorption (24 hr)	0.30	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	115		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2210	MPa	ASTM D638
Tensile Strength (Yield)	42.1	MPa	ASTM D638
Tensile Strain (Yield)	20	%	ISO 527-2
Compressive Strength			ASTM D695
1% Strain	14.5	MPa	
10% Strain	75.8	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	59	J/m	ASTM D256

Tensile Impact Strength	10.5	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	168	°C	
1.8 MPa, Unannealed	118	°C	
Melting Temperature	175	°C	ASTM D2133
Service Temperature			
Intermittent	149	°C	
Long Term	85	°C	
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94

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