

Delrin (Acetal Homopolymer)

Similar properties to that of acetal copolymer, however with marginally superior mechanical properties & better wear resistance. Unfortunately a slightly lower max continuous operating temperature and not as resistant to hot water:

- High rigidity
- Good impact resistance
- Low moisture absorption
- Natural white colour
- Continuous working temperature 90°C (max 145°C)
- Good chemical resistance (pH 5-11)
- Excellent dimensional stability
- Ideal for close tolerance parts

Application: Similar applications to acetal copolymer but where marginally better mechanical properties and wear resistance are required.

Delivery Programme

Standard Rod 3m long		
Diameter(mm):	5 (Min)	50 (Max)
Standard Rod 1, 2 & 3m long		
Diameter(mm):	56 (Min)	200 (Max)
Precision Ground Rod 3m long		
Diameter(mm):	7.94 (Min)	50.8 (Max)

Technical specification

Property	ASTM Test Method	Units	Delrin
Colour	-	-	White
Specific Gravity	D792	-	1.42
Water Absorption			
Saturation in water	D570	%	0.9
Tensile Strength	D638	N/mm ²	70
Tensile Modulus	D638	N/mm ²	2105
Elongation	D638	%	>30
Flexural Strength	D790	N/mm ²	98
Flexural Modulus	D790	N/mm ²	2620
Hardness	Rockwell	-	R120
	Shore D	-	-
Melt Point	D2117	°C	175
Max allowable service temp in air			
for short periods (1)		°C	145
continuously for 20000hrs (2)		°C	90
Minimum Service Temperature		°C	-50
Linear thermal expansion coefficient	D696	K ⁻¹ x 10 ⁻⁵	11
Thermal Conductivity	C117	W/K.m	0.23
Flammability	D635	-	Slow Burning
UL (thickness in mm)	UL-94	-	HB
Volume Resistivity	D257	Ohm.cm	>10 ¹²
Dielectric Strength (3)	D149	kV/mm	>20
Outside applications - UV resistance	-	-	D
Acids - Strong (pH < 3)	-	-	D
Alkalis - Strong (pH > 11)	-	-	D
Chlorinated Hydrocarbons	-	-	A
Hot Water	-	-	D

Authorised Distributor

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- (1) Only a few hours, with little or no load applied
- (2) After these periods mechanical properties reduce by approx 50%.
 Note, however, that service temperatures are load and time dependent
- (3) Test specimen 1.6mm thick unless otherwise stated

- A' No attack
- B' Mild attack by absorption
- C' Dimensional change due to absorption
- D' Decomposition in short time
- E' In steam - at 160°C, decomposition after short time

The data are typical values and are not intended to represent specifications. Their aim is to guide the user toward a material choice.