TECAFORM AD CL

Chemical Designation:	Polyoxymethylene (Homopolymer) (Acetal)
DIN Abbreviation:	POM
Colour, Filler:	Opaque Lubricant

TECAFORM AD CL (Delrin ®) is a semi-crystalline, thermoplastic bearing material with a low coefficient of friction, high strength and rigidity and excellent machinability

Main characteristics:

- Very good sliding properties
- Strong and very rigid
- Tough
- Resistant to dilute acids, cleaning agents, numerous solvents
- Very good electrical insulation
- Difficult to bond
- Not resistant long term to water over 60^{0}C
- Easily machined

Preferred fields: Mechanical engineering, automotive engineering, transport and conveyor technology, textile machinery, electrical engineering, precision engineering, process engineering, packaging machinery

Applications:

- Friction bearings
- Gears
- Wiper blades
- Chain guides
- Friction strips
- Seals
- Insulating bushes
- Rollers

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The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.

Properties	Unit	Test method DIN EN ISO / ASTM	
Mechanical			
Density	g/cm³	527 / D 792	1.42
Tensile strength at yield	MPa	527 / D 638	70
Tensile strength at break	MPa	527 / D 638	20
Elongation at break	%	527 / D 638	
Modulus of elasticity in tension	MPa	527 / D 638	3100
Modulus of elasticity in flexure	MPa	178 / D 790	2760
Ball indentation hardness	MPa	2039 /1	M92
Impact strength	kJ/m²	179 / D 256	o.Br
Creep rupture strength after 1000 hrs with static load	MPa		
Time yield limit for 1% elongation after 1000 hrs.	MPa		
Coefficient of friction against hardened and ground steel p = 0,05 N/mm², v = 0,6 m/s	–		0.1
Wear conditions as above	µm/km		
Thermal			
Crystalline melting point	°C	DIN 53 736	175
Glass transition temperature	°C	DIN 53 736	– 60
Heat distortion temperature Method A Method B	°C °C	R 75 R 75	

Properties	Unit	Test method DIN EN 1S0 / ASTM	
Thermal			
Max. service temperature short term long term	°C °C		150 100
Coefficient of thermal conductivity	W/(m · K)		0.37
Specific heat	J/(g · K)		1.47
Coefficient of thermal expansion	10^{-5}/K	DIN 53 483 / D 696	10
Electrical			
Dielectric constant at 10^5 Hz		DIN 53 483	3,5
Dielectric loss factor at 10^5 Hz		DIN 53 483	0.006
Specific volume resistance	Ω · cm	DIN 60093	10^{15}
Surface resistance	Ω	DIN 60093	10^{15}
Dielectric strength 1 mm	kV/mm	ASTM 149	15
Tracking resistance		53 480	
Miscellaneous			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	62	0.24
Water absorption at saturation at 23 °C	%	62	1
Resistance to hot water, washing soda			not resistant
Flammability according to UL standard 94			HB
Resistance to weathering			not resistant

ENSINGER: Production and stock programme

- Semi-finished product, finished parts, injection moulded parts and profiles in more than 500 materials and modifications.
- Engineering plastics: PA extruded or cast, POM, PC, PET, PBT, PPE, PP, PE
- High temperature plastics: PI, TPI, PEEK, PPS, PES, PPSU, PEI, PSU, PVDF, PCTFE, PTFE
- Stock length: Standard 3 metres. Cast rod and sheet 2 mts . Tube up to 3.5 mts. PE, PP, PVC, and PTFE 2 mts
- Pressed/sintered semi-finished product: PI, PEEK, PPS, PTFE/PI and modifications, as well as PCTFE in special sizes ie, large discs, tubes and rings with diameters up to about 1400 mm
- Material modifications: eg. glass, carbon and aramid fibre, talc, MoS_2, graphite, PTFE, PE, silicone oil, internal lubrication