

**Tecaform® HPV 13  
(Acetal homopolymer, PTFE-filled)(Delrin® 100AF blend alternative)**

Tecaform® HPV 13 is a brown homopolymer acetal with an internal PTFE lubricant. Its low coefficient of friction, excellent PV values, toughness, wear resistance, and machinability make it an exceptional material for use in many industrial and military components with moving parts. Additionally, Tecaform® HPV 13 has superior chemical resistance and flexural fatigue properties, as well as low moisture absorption associated with acetal materials.

- No stick slip - Tecaform® HPV 13 provides less starting torque and smooth continuous operation.
- Low coefficient of friction
- Good surface hardness and resilience
- Superior wear resistance - Improved performance, reliability, and longer life result from Tecaform® HPV 13 excellent wear resistance.
- Self-lubricating - The use of Tecaform® HPV 13 can eliminate costly lubricants; reduce maintenance costs and product contamination.
- Complies with FDA regulations 21CFR 177.2470 and 21CFR 177.105 for use in contact with food.
- Good dimensional stability
- Excellent machinability
- Superior resistance to repeated impacts and creep

Tecaform® HPV 13's range of exceptional properties makes it an ideal engineering plastic for use in precision instruments and measuring devices, as well as in many critical components in the automotive, aviation, military, industrial, food processing machinery, business equipment, and specialty valve areas.

Primary Specification (Resin): ASTM D-4181 POM110L13A00000

Shapes Specification: ASTM D-6100S-POM0132

Properties	ASTM Test Method	Units	Tecaform® HPV 13
<b>Physical</b>			
Density	D792	lbs/in <sup>3</sup>	0.056
Specific Gravity	D792	g/cc	1.54
Water Absorption, 24 hours, 73 F	D570	%	0.22
<b>Mechanical</b>			
Tensile Strength, Break, 73 F	D638	psi	12,500
Tensile Modulus, 73 F	D638	psi	858,000
Elongation, Break, 73 F	D638	%	17.5
Flexural Strength, 73 F	D790	psi	10,000
Flexural Modulus, 73 F	D790	psi	350,000
Izod Impact Strength, Notched, 73 F	D256	ft-lbs/in	0.7
Rockwell Hardness	D785	"R" scale	118
<b>Thermal</b>			
Deflection Temperature, 66 psi		°F	
Deflection Temperature, 264 psi	D648	°F	215
Maximum Temperature, Long Term		°F	185
Maximum Temperature, Short Term		°F	
Coefficient of Thermal Expansion	D696	in/in/°F	5.1 x 10 <sup>-5</sup>
Applicable Temperature Range for Thermal Expansion		°F	85 - 140
Melting Point		°F	347
<b>Tribological</b>			
Coefficient of Friction, static			.07
Coefficient of Friction, dynamic			.12
Wear factor		in <sup>3</sup> /hr*1/PV	20 x 10 <sup>-10</sup>
Limiting PV, 10 fpm		ft-lbs/min	12,000
Limiting PV, 100 fpm		ft-lbs/min	1,600

*NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.*