

## HYDEX<sup>®</sup> 301 - Stock Shapes

### Chemical Designation

PU (Polyurethane)

### Colour

translucent yellow

### Density

1.2 %

### Main features

- broad chemical compatibility
- very good dimensional stability
- good impact strength
- good mechanical properties
- high toughness

### Target Industries

- medical technology
- chemical plant engineering
- oil and gas industry
- pharmaceutical industry
- cleanroom technology

Mechanical properties	condition	value		test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	310,000	psi	ASTM D 638	
Tensile strength at yield	@ 73 °F	10,000	psi	ASTM D 638	
Tensile strength at break	@ 73 °F	9,000	psi	ASTM D 638	
Elongation at yield	@ 73 °F	7	%	ASTM D 638	
Elongation at break	@ 73 °F	140	%	ASTM D 638	
Flexural strength	@ 73 °F	14,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	340,000	psi	ASTM D 790	
Impact strength (Izod)	@ 73 °F	2.4	ft-lbs/in	ASTM D 256	
Coefficient of friction	Static (vs. steel)	0.22		ASTM D 3702	
Coefficient of friction	Dynamic (vs. steel)	0.21		ASTM D 3702	
Thermal properties	condition	value		test method	comment
Vicat softening point		228	°F	ASTM D 1525	(1) Injection molded data
Deflection temperature	@ 66 psi	220	°F	ASTM D 648	(2) Injection molded data
Deflection temperature	@ 264 psi	170	°F	ASTM D 648	
Service temperature	Long Term	228	°F	-	1)
Thermal expansion (CLTE)		3.4*10 <sup>-5</sup>	in/in/°F	ASTM D 696	2)
Other properties	condition	value		test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.19	%	ASTM D 570	

→ Resin specification:  
 Ensinger Internal Specification  
 Shapes specification:  
 NONE

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