

## HYDLAR ® Z - Stock Shapes

### Chemical Designation

PA 66 (Polyamide 66)

### Colour

yellow-brown

### Density

1.16 g/cm<sup>3</sup>

### Fillers

aramide fibres

### Main features

- excellent wear properties
- excellent strength and stiffness
- minimizes mating surface abrasion
- easy to machine
- high mechanical load capacity

### Target Industries

- construction industry
- conveyor technology
- gear manufacturing
- power engineering
- mechanical engineering

<b>Mechanical properties</b>	<b>condition</b>	<b>value</b>		<b>test method</b>	<b>comment</b>
Modulus of elasticity (tensile test)		1,300,000	psi	ASTM D 638	1) (1) Injection molded samples (2) Injection molded samples
Tensile strength		16,000	psi	ASTM D 638	2)
Elongation at break		4	%	ASTM D 638	
Flexural strength		23,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)		900,000	psi	ASTM D 790	
Compression strength		19,300	psi	ASTM D 695	
Impact strength (Izod)		2.7	ft-lbs/in	ASTM D 256	
Wear rate	ASTM Thrust Washer Test @ PV=2,500	79-128		ASTM D 3702	
<b>Thermal properties</b>	<b>condition</b>	<b>value</b>		<b>test method</b>	<b>comment</b>
Deflection temperature	@264 psi	470	°F	ASTM D 648	(1) Data obtained from public source
Service temperature	Intermittent	300	°F	-	
Service temperature	Long Term	200	°F	-	1)
Thermal expansion (CLTE)		1.6*10 <sup>-5</sup>	in/in/°F	ASTM D 696	
<b>Other properties</b>	<b>condition</b>	<b>value</b>		<b>test method</b>	<b>comment</b>
Limiting PV	P=250 PSI; V=10 ft/min	2,500	psi-fpm	ASTM D 3702	
Moisture absorption	@ 24 hrs, 73 °F	0.8	%	ASTM D 570	
Moisture absorption	@ saturation, 73 °F	6.3	%	ASTM D 570	

→ Resin specification:  
ASTM D6779-11 PA0100 and ASTM D4066-01a (Reapproved 2008) PA0110  
Shapes specification:  
ASTM D 5989-11 S-PA0101R3050000000

Material properties and averages can vary from one manufacturer to another. These properties are given as reference without any obligation or liability on behalf of Precision Punch and Plastics.