

HYDEX® 4101L natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PBT (Polybutylene terephthalate)

Colour

white

Density

1.36 g/cm³

Fillers

PTFE, lubricant

Main features

- very good chemical resistance
- resistant to cleaning agents
- low moisture absorption
- good impact strength
- high dimensional stability
- good slide and wear properties
- high stiffness

Target Industries

- food processing
- food technology
- food engineering
- semiconductor technology
- automotive industry
- printing machines
- mechanical engineering
- packaging and paper machinery

Mechanical properties	condition	value	unit	test method	comment
Tensile strength		6,600	psi	ASTM D 638	(1) per LNP EPALP-TB001
Modulus of elasticity (tensile test)		350,000	psi	ASTM D 638	(2) per LNP EPALP-TB001 (3) per LNP EPALP-TB001
Elongation at yield (tensile test)		30	%	ASTM D 638	
Flexural strength		11,500	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	350,000	psi	ASTM D 790	
Compression strength	@ 73 °F, 1% strain	2,800	psi	ASTM D 695	
Compression strength	@ 73 °F, 10% strain	10,500	psi	ASTM D 695	
Compression modulus		275,000	psi	ASTM D 695	
Impact strength (Izod)		0.90	ft-lbs/in	ASTM D 256	
Rockwell hardness	M Scale (R Scale)	75 (115)		ASTM D 785	
Coefficient of friction	Dynamic (vs. steel)	0.11		-	1)
Coefficient of friction	Static (vs. steel)	0.08		-	2)
Wear rate	@ 2000 PV	38*10 ⁻¹⁰	psi-fpm	-	3)
Thermal properties	condition	value	unit	test method	comment
Deflection temperature	@264 psi	195	°F	ASTM D 648	(1) per UL746B
Service temperature	Long Term	221	°F	-	1)
Other properties	condition	value	unit	test method	comment
Limiting PV	@ 100 fpm	15,700	psi-fpm	-	1) (1) per LNP EPALP-TB003
Moisture absorption	@ 24 hrs, 73 °F	0.07	%	ASTM D 570	

→ Resin specification:
ASTM D5927-09 TPES0100
Shapes specification:
ASTM D6261-10 S-TPES0120 B1424000

This information reflects the current state of our knowledge and is intended only to assist and advise. It is given without obligation or liability. It does not assure or guarantee chemical resistance, quality of products or their suitability in any legally binding way. Values are not minimum or maximum values, but guidelines that can be used for comparative purposes in material selection. They are within the normal range of product properties and do not represent guaranteed property values. Testing under individual application circumstances is always recommended. Data is obtained from extruded shapes material unless otherwise noted. References to FDA compliance refer to the resins from which the products were made unless otherwise noted. All trade and patent rights should be observed. All rights reserved. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com.