

## Hydex® 4101 and 4101L (Polybutylene Terephthalate)

*A Family of Stock Shape Plastics with Elevated Performance over PET-P, Acetal and Nylon.*

In Direct Comparison to other Commonly Used Plastics, HYDEX 4101 and 4101L have:

Improved Wear and Chemical Resistance Versus Acetal

- Hydex 4101 and 4101L are compatible with chemicals having a pH range of 2.0 - 9.0; acetal's range is 4.0 - 9.0.
- Hydex 4101 and 4101L can withstand repeated "CIP" chemical wash down without affecting material performance. Acetal degrades upon repeated contact with aqueous chlorine solutions.
- Hydex 4101L has 30% higher limiting PV than Delrin AF.
- Hydex 4101L has about two times better wear factor than acetal.
- Hydex 4101L is approved for direct food contact; Delrin AF is not.

Superior Dimensional Stability over Nylon

- Hydex 4101 and 4101L have moisture absorption of 0.07%. Nylon has moisture absorption 15 times greater than Hydex, and can exhibit significant dimensional changes in use.

Best Wear and Lubricity when Compared to PET-P

- Hydex 4101 has 20% greater impact strength than PET-P.
- Hydex 4101L has 20% greater impact strength than PET-P.
- Hydex 4101L has about 50% better wear factor than PET-P.
- Hydex 4101L has more than twice the LPV performance than PET-P.
- Hydex 4101L has about 50% lower coefficient of friction than PET-P.

**Hydex® 4101** is a PBT Polyester with an outstanding set of properties including: wear resistance, chemical resistance and toughness.

**Hydex® 4101L** (Lubricated) is an enhanced version with improved wear, PV range and lubricity over Hydex 4101.

Properties	ASTM Test Method	Units	Hydex® 4101	Hydex® 4101L
<b>Physical</b>				
Specific Gravity	D792		1.31	1.36
Water Absorption (24 hours)	D570	%	0.07	0.07
<b>Mechanical</b>				
Tensile Strength	D638	psi	9,400	7,200
Tensile Modulus	D638	psi	425,000	380,000
Tensile Elongation	D638	%	50	40
Flexural Modulus	D790	psi	420,000	390,000
Notched Izod Impact	D256	ft-lb/in	0.7	0.7
Wear Factor @ 2000 PV	LNP EPALP-TB001	in <sup>5</sup> -min/ft-lb-hr	210	38
Dynamic Coefficient of Friction (Steel)	LNP EPALP-TB001		0.25	0.11
Static Coefficient of Friction (Steel)	LNP EPALP-TB001		0.19	0.08
LPV @ 100 fpm	LNP EPALP-TB003	psi-fpm	6,000	15,700
<b>Thermal</b>				
Heat Deflection Temp. @ 264 psi	D648	°F	200	195
Max Continuous Use Temperature	UL7468	°F	221	221
<b>Compliance</b>				
FDA Compliant			Yes	Yes
3A			Yes	Yes
USDA Compliant			Yes	Yes

*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. All values at 73°F (23°C) unless otherwise noted.*