

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 Hyd

| Properties | ASTM Test Method | Units | Hydex 4101 | Hydex 4101 L |
|--|------------------|----------|------------|--------------|
| Physical | | | | |
| Specific Gravity | D792 | | 1.31 | 1.36 |
| Water Absorption (24 hours) | D570 | % | 0.07 | 0.07 |
| Mechanical | | | | |
| 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 |
| Heat Deflection Temp. @ 264 psi | D648 | °F | 200 | 195 |
| Max Continuous Use Temperature | UL7468 | °F | 221 | 221 |
| Wear Factor @ 2000 PV | LNP EPALP-TB001 | | 0.25 | .11 |
| Static Coefficient of Friction (Steel) | LNP EPALP-TB001 | | 0.19 | 0.08 |

| Properties | ASTM Test Method | Units | Hydex 4101 | Hydex 4101 L |
|-------------------|------------------|-------|------------|--------------|
| Compliance | | | | |
| 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. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.

