



BioLogiQ creates plastics from polysaccharides found in plants. These plastics are designed to enhance both the functional and environmental performance of the packages and products produced with them.

All BioLogiQ compounded plastics start with **NuPlastiQ** BioPolymer, a 100% natural, renewably sourced, plant-based biopolymer.

## Description

- One of the BioBlend® XP family of high performance BioPolymers designed for blown film applications.
- BioBlend® XP 24875 is a masterbatch that contains 50% NuPlastiQ GP BioPolymer compounded with polyethylene.
- Made from 50% annually renewable agricultural resources.
- Supplied in pellet form.

## Applications

- Used for final products requiring strength and plasticity, such as packaging.

## Properties

PHYSICAL	TEST METHOD	NOMINAL VALUE	UNITS
Density:	ASTM D792	1.17	g/cm <sup>3</sup>
<b>THERMAL</b>			
Melt Flow Index	ASTM D1238	0.56	g/10 min (190 °C/5 kg)
Melting Temperature Range:	ASTM D3418	130	° C
<b>ADDITIONAL INFORMATION</b>			
Water Content:	ASTM D6980	≤ 0.5	%
<b>MECHANICAL PROPERTIES<sup>(1)</sup></b>			
<b>Tensile Properties</b>			
Secant Modulus @ 1%	D638	568	MPa
Tensile Strength at Break	D638	19	MPa
Elongation at Break	D638	12	%
<b>Flexural Properties</b>			
Flexural Modulus	D790	708	MPa
<b>Notched Impact Strength</b>			
Izod - Notched	D256	47	J/m
<b>FILM PROPERTIES<sup>(2)</sup></b>			
<b>Tensile Strength</b>			
MD	ASTM D882	2958	psi
TD	ASTM D882	2475	psi
<b>Elongation at Break</b>			
MD	ASTM D882	518	%
TD	ASTM D882	657	%
<b>Elmendorf Tear</b>			
MD	ASTM D1922	287	g
TD	ASTM D1922	567	g
<b>Dart Drop Test</b>			
	ASTM D1709	84	g

Table Notes:

- 1) Mechanical properties were measured on injection molded parts made directly from the 50% NuPlastiQ / 50% polyethylene masterbatch.
- 2) The reported film properties are for a monolayer blown film that was let-down with 50% additional LLDPE to a concentration of 25% NuPlastiQ. The thickness was 1.0 mil, and the blow-up ratio was 2.5:1.
- 3) These values are typical properties only and should not be used for specification purposes. End users should confirm results with their own tests.

## Processing Considerations

- XP 24875 is designed to be diluted with polyethylene to a final NuPlastiQ® GP BioPolymer content between 10% and 40%.
- XP 24875 can be run on existing process equipment.
- Films made with NuPlastiQ are slightly more sensitive to processing conditions such as temperature profile, die gap, and blow-up ratio. See the NuPlastiQ Film Processing Guide for additional information.
- Under normal conditions processing NuPlastiQ may cause a slight odor and/or smoke. Always use proper ventilation. See the BioBlend® XP 24875 SDS for details.
- This TDS covers the following BioBlend® XP BioPolymers: XP 24875

## Storage and Drying

- Pellets are shipped in sealed moisture-proof bags and are ready to use as supplied. They should be stored in the sealed container away from heat until used.
- If pellets are exposed to a humid environment, they will absorb moisture from the air. If needed, dry pellets by introducing warm dry air at 60°C for 1-4 hours. Pellets should be <0.5% moisture content prior to processing.