



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 GP, a 100% natural, renewably sourced, plant-based biopolymer.

Description

- A member of the NuPlastiQ® XP family of high-performance BioPolymers designed for blown film applications.
- This TDS covers the following NuPlastiQ® XP BioPolymers: XP 22250 and XP 22251
- NuPlastiQ® XP 22250 is a Masterbatch that contains 50% NuPlastiQ® GP BioPolymer compounded with HDPE.
- Made from 50% annually renewable agricultural resources.
- Supplied in pellet form.

Applications

- NuPlastiQ® XP 22250 is intended for bags and other film applications that require high tensile strength and good stiffness.

Properties

PHYSICAL	TEST METHOD	NOMINAL VALUE	UNITS
Density	ASTM D792	1.2	g/cm ³
THERMAL			
Melt Flow Index	ASTM D1238	0.88	g/10 min (190 °C/5 kg)
Melting Temperature Range	ASTM D3418	160 – 180	° C
ADDITIONAL INFORMATION			
Water Content	ASTM D6980	≤ 0.5	%
FILM PROPERTIES⁽¹⁾			
Tensile Strength at Break			
MD	ASTM D882	5400	psi
TD	ASTM D882	2000	psi
Elongation at Break			
MD	ASTM D882	430	%
TD	ASTM D882	< 5	%
Elmendorf Tear			
MD	ASTM D1922	< 10	g
TD	ASTM D1922	400	g
Dart Drop Test			
	ASTM D1709	< 50	g

Notes:

- 1) The reported film properties were tested on a monolayer blown film that was let-down with additional HDPE to a concentration of 25% NuPlastiQ. The thickness was 1.0 mil, and the blow-up ratio was 2.5:1.
- 2) 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 22250 is designed to be diluted with polyethylene to achieve a final NuPlastiQ® GP BioPolymer content between 10% and 35%.
- XP 22250 can be run on existing processing equipment.

Product: **NuPlastiQ® XP 22250**



- 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 or consult with BioLogiQ for additional information.
- Under normal conditions processing NuPlastiQ may cause a slight odor and/or smoke. Always use proper ventilation. See the NuPlastiQ® XP 22250 SDS for details.

Storage and Drying

- Pellets are shipped in moisture-proof metallic bags and are ready to use as supplied. They should be stored in a sealed container with desiccant in a dry location away from heat.
- 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.