Product: **BioBlend® XP 24250**

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 24250 is a masterbatch that contains 50% NuPlastiQ BioPolymer compounded with metallocene LLDPE.
- Made from 50% annually renewable agricultural resources.
- Supplied in pellet form.

Applications

- Used for final products requiring strength and plasticity such as agricultural film, blown film, cast film, food packaging, and heavy duty bags.

Properties

PHYSICAL	TEST METHOD	NOMINAL VALUE	UNITS
Density:	ASTM D792	1.16	g/cm³
THERMAL			
Melt Flow Index	ASTM D1238	0.65	g/10 min (190 °C/5 kg)
ADDITIONAL INFORMATION			
Moisture Content:[1]	ASTM D6980	1.0	%
FILM PROPERTIES[2]			
Tensile Strength			
MD	ASTM D882	34	MPa
TD	ASTM D882	29	MPa
Elongation at Break			
MD	ASTM D882	570	%
TD	ASTM D882	670	%
Elmendorf Tear			
MD	ASTM D1922	390	g
TD	ASTM D1922	590	g
Dart Drop Test			
	ASTM D1709	290	g

Table Notes:
1) Moisture content was measured with an infrared moisture analyzer at 110°C for 10 minutes.
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.

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Processing Considerations

- XP 24250 is designed to be diluted with polyethylene to a final NuPlastiQ® content between 10% and 40%.
- XP 24250 can be run on existing process equipment with a few adjustments.
- Films made with NuPlastiQ are more sensitive to processing conditions such as temperature profile, residence time, die gap, and blow-up ratio. See the NuPlastiQ Film Processing Guide for additional information.
  - A typical recommended temperature profile will be in the 160 ℃ –190 ℃ range.
  - Depending on equipment, process conditions, and residence time, as temperatures increase in this range the glycerin plasticizer may experience some volatilization. This may cause a slight odor and/or smoke and is expected under normal processing conditions. Always use proper ventilation. See the BioBlend® XP 24250 SDS for details.
- Some equipment (multi-layer, higher output, lower residence time) may allow for higher processing temperatures (190 ℃ - 200 ℃).
- Melt temperatures above 205 ℃ may cause material degradation, lensing and fish-eyes in the film.
- When extruder operation has to be stopped temporarily, it is recommended to purge the material in the barrel before resuming film processing.

Packaging

- XP 24250 can be shipped in the following formats:
- 25kg moisture barrier bags
- 800 kg gaylord boxes with a moisture barrier bag

Storage

- XP 24250 should be stored in a dry location away from heat and direct sunlight. Material must remain sealed in moisture barrier bag until used. Material should be stored under normal warehouse conditions (typical max temperature of 80°F/26°C).

Drying

- BioLogiQ BioBlends are dried after production and shipped in sealed moisture-proof bags that are ready to use as supplied. They should be stored indoors 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 no more than 80°C for 1-4 hours.
- The estimated moisture content of a BioLogiQ BioBlend can be measured with an infrared moisture analyzer at 110°C for 10 minutes. The result of the measurement will not perfectly equal the moisture content, due to possible partial evaporation of plasticizer.