



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® BC Resins designed for injection molded applications.
- Made from annually renewable agricultural resources.
- BC 27255 contains 50% NuPlastiQ® CG BioPolymer blended with a high heat, high flow PLA homopolymer.
- BC 27255 is 100% biobased.
- BioBlend® BC 27255 is supplied in pellet form, fully compounded.

Applications

- BioBlend® BC 27255 is intended for injected molded parts.
- Made from components that are certified to be industrially compostable. End users should conduct their own tests to determine if final product will qualify for certification. Contact BioLogiQ’s technical team for details.

Properties

PHYSICAL	TEST METHOD	NOMINAL VALUE	UNITS
Density:	ASTM D792	1.32	g/cm ³
THERMAL			
Melt Flow Index	ASTM D1238	4.9	g/10 min (190 °C/2.16 kg)
ADDITIONAL INFORMATION			
Water Content:	ASTM D6980	≤ 0.5	%
MECHANICAL PROPERTIES			
Tensile Properties			
Secant Modulus @ 1%	ASTM D638	1050	MPa
Tensile Strength at Break	ASTM D638	16.9	MPa
Elongation at Break	ASTM D638	2	%
Flexural Properties			
Flexural Modulus	ASTM D790	2970	MPa
Ultimate Flexural Strength	ASTM D790	36.6	MPa
Notched Impact Strength			
Izod - Notched	ASTM D256	9.4	J/M

Table Notes:

- 1) Moisture content was measured with an infrared moisture analyzer at 105°C for 10 minutes.
- 2) Mechanical properties were measured on injection molded parts made directly from the 50% NuPlastiQ / 50% PLA masterbatch.
- 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

- BC 27255 is designed to be diluted with additional PLA to achieve a final NuPlastiQ concentration between 10% and 40%.

- BC 27255 can be run on existing process equipment with a few adjustments.
- Injection molded applications with BC 27255 are slightly more sensitive to processing conditions such as temperature profile and cycle time.
- A typical recommended temperature profile will be in the 180°C – 210°C 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® BC 27255 SDS for details.
- If the melt temperature is too hot for the specific blend, some scorching and dark coloring may occur. Lower the extrusion temperature and continue processing until the color lightens to an acceptable level.
- In order to allow the PLA to crystallize, the recommended starting mold temperature is 90-100°C. Some adjustment may be required.

Storage and Drying

- Pellets are shipped in sealed moisture-proof bags and are ready to be used as supplied. Until used, they should be stored in a sealed container away from heat.
- If pellets are exposed to a humid environment, they will absorb moisture. 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.