

A biodegradable and biobased thermoplastic polymer derived from natural resources (corn starch). This PLA grade is applicable to a variety of uses including the production of plastic films, plastic bottles, fibres, medical applications, food packaging and others.

Applications		Features	
Food Packaging		Renewable Resource Content	
Fibers		Compostable	
Film		Food Contact Acceptable	
Bottles		Biodegradable	
Sustainability			
Bio-Based Content	100%		
Compostability	Industrially Compostable		
Physical Properties			
Density	1.24 g/cm ³		
Melt Mass Flow Rate	4 g/10min		(190°C/2.16 kg)
Mechanical Properties			
Tensile Elongation	5 %		At Break
Tensile Strength	45 MPa		
Thermal Properties			
Glass Transition Temperature	60 °C		
Melt Temperature	155 °C		
Chemical Properties			
D-Content	4 %		
Moisture Content	400 ppm		
Processing Methods			
Extrusion			
Extrusion Parameters			
Die Temperature	190 - 210 °C		
Feed Zone	20 - 40 °C		
Melt Temperature (Extrusion)	200 - 220 °C		
Melt Zone	170 - 190 °C		
Mixing-Conveying Zone	190 - 210 °C		
Forms			
Pellets			

Notes

MACHINE CONFIGURATION

Can be processed on conventional extrusion equipment and can be used as neat resin or as part of a compound to optimise product properties. General purpose screw with L/D ratio between 24 and 32 are recommended.

Note: During PLA processing, not exceed 230°C.

START-UP & SHUTDOWN

Not compatible with most of the thermoplastic resins, so purging is an important step to reach the full benefits of the mechanical and optical PLA properties. Following steps are recommended:

1. Clean and purge the equipment to prevent cross contamination.
2. Purge the extruder with a low viscosity PE or PP at temperature of about 210°C.
3. Clean the hopper system to avoid contamination.
4. Introduce PLA polymer into the extruder at the operating conditions used in step 1.
5. Once PLA has purged the extruder, reduce temperatures to desired set points.
6. At shutdown, purge the machine with high-viscosity polystyrene or polypropylene.

HANDLING & STORAGE

PLA should be stored at ambient temperature and at atmospheric pressure in its original packaging. The product should be stored in dry, well-ventilated areas, and it is recommended to avoid prolonged storage under extreme temperatures, direct sunlight, or other sources of radiation. It is advisable to convert the product within 12 months after delivery, provided appropriate storage conditions are used.

TRANSPORTATION

It is strictly forbidden to use sharp tools such as iron hooks during loading and unloading. During transportation, the goods must not be exposed to sunlight or rain, or mixed with sand, scrap metal, coal, etc., and not mixed with toxic, corrosive, and flammable materials.

DRYING

To avoid PLA degradation during transformation, we recommend moisture content below 200 ppm. Typical drying condition for crystallised pellets are 4-6 hours at 85°C. The resin should not be exposed to atmospheric conditions after drying to prevent moisture uptake. Keep the package sealed until ready to use and promptly reseal any unused material. Pellet that has been exposed to the atmosphere for extended time periods could require additional drying.

Estimated Properties

Properties identified as 'Estimated**' have been estimated from the generic equivalent. These are provided for comparative purposes and are not reflective of the actual grade as the relevant data is not available.

Storage Recommendations

Keep dry at ambient temperature. Store indoors avoiding a humid environment, heat and direct sunlight. Use material within 6 months after delivery date, in order to prevent possible material quality deterioration.

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