

## NatureWorks® Ingeo™ 3251D Injection Grade PLA

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Polylactic Acid (PLA) Biopolymer

### Material Notes:

Ingeo™ Biopolymer 3251D is designed for injection molding applications. This polymer grade has a higher melt flow capability than other Ingeo™ resins currently in the market place. The higher flow capability allows for easier molding of thin-walled parts. It is designed for injection molding applications, both clear and opaque, requiring high gloss, UV resistance and stiffness.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_NatureWorks-Ingeo-3251D-Injection-Grade-PLA.php](http://www.lookpolymers.com/polymer_NatureWorks-Ingeo-3251D-Injection-Grade-PLA.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D792
Viscosity Measurement	2.5	2.5	Relative Viscosity
Linear Mold Shrinkage	0.003 - 0.005 cm/cm	0.003 - 0.005 in/in	
Melt Flow	30 - 40 g/10 min	30 - 40 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	70 - 85 g/10 min	70 - 85 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 210 °C	@Load 4.76 lb, Temperature 410 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	48.0 MPa	6960 psi	ASTM D638
Elongation at Break	2.5 %	2.5 %	ASTM D638
Flexural Strength	83.0 MPa	12000 psi	ASTM D790
Izod Impact, Notched	0.160 J/cm	0.300 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	160 - 170 °C	320 - 338 °F	ASTM D3418
Glass Transition Temp, Tg	55.0 - 65.0 °C	131 - 149 °F	ASTM D3417

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	Thickness Unknown

Processing Properties	Metric	English	Comments
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Feed Temperature Processing Properties	166 - 177 °C Metric	331 - 351 °F English	Comments
Nozzle Temperature	188 - 205 °C	370 - 401 °F	
Melt Temperature	188 - 210 °C	370 - 410 °F	
Mold Temperature	25.0 °C	77.0 °F	
Back Pressure	0.345 - 0.689 MPa	50.0 - 100 psi	
Screw Speed	100 - 200 rpm	100 - 200 rpm	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China