

# Plantic® HF301

Biodegradable Polymers

Plantic Technologies Limited

## Message:

Plantic Technologies Limited develops and produces advanced bio-based materials. Plantic® is an innovative product made from corn-starch (maize) that is Australian grown and non-genetically modified. Plantic® is an Australian registered trademark of Plantic Technologies Limited.

Plantic® HF301 is a thermoplastic starch (TPS) polymer formulated for injection molding. It has been designed to be used for thin walled (0.5 - 1.5 mm wall thickness), flexible injection molded applications.

General Information			
Features	Biodegradable		
	Food Contact Acceptable		
	Good Flexibility		
	Renewable Resource Content		
Uses	Thin-walled Parts		
Forms	Granules		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.44	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow	1.2 to 1.5	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	45		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	800	MPa	ASTM D638
Tensile Strength (Yield)	< 19.0	MPa	ASTM D638
Tensile Elongation (Break)	140	%	ASTM D638
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	32	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	37.1	°C	ASTM D648
Vicat Softening Temperature	45.0	°C	ASTM D1525
Injection	Nominal Value	Unit	
Drying Temperature	70.0	°C	
Drying Time	10 to 12	hr	
Suggested Max Moisture	2.0 to 3.0	%	
Rear Temperature	110 to 150	°C	
Middle Temperature	150 to 170	°C	
Front Temperature	160 to 190	°C	
Nozzle Temperature	170 to 190	°C	

Processing (Melt) Temp	175 to 200	°C
Mold Temperature	25.0 to 50.0	°C
Back Pressure	0.00 to 10.0	MPa
Screw Speed	50 to 150	rpm

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