

# Biograde D-2M

Biodegradable Polymers

Biograde Group of Companies

Message:

A Hybrid resin for rigid moulding and extrusion applications where Biodegradability is not required.  
For use in applications where the use of renewable resources are desired.  
Can be used for injection moulding  
BIOGRADE DM is based on a blend of thermoplastic starch (TPS) and polyolefin's. This grade of resin is compatibilised to offer a high level of mechanical strength, good elongation properties and toughness. The resin is based on corn starch which is a renewable material.  
Applications  
Injection moulded products such as cutlery, toothbrushes, combs, shavers, golf-tees, etc.  
Stakes and pegs  
Horticultural products such as flower pots and stakes  
Injection moulded caps and closures  
Disposable plates and produce trays

General Information			
Features	Biodegradable		
	Good Toughness		
	High Elongation		
	High Strength		
	Renewable Resource Content		
Uses	Aircraft Interiors		
	Caps		
	Closures		
	Disposable Tableware		
	Lawn and Garden Equipment		
	Personal Care		
	Sporting Goods		
	Support Trays		
	Toothbrush Handles		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.08	g/cm <sup>3</sup>	ASTM D4883
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	7.0 to 7.5	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D883

Yield	> 13.0	MPa	
Break	> 13.0	MPa	
Tensile Elongation (Break)	> 200	%	ASTM D883
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	31	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Peak Melting Temperature	90.0	°C	ASTM D3418
Injection	Nominal Value	Unit	
Suggested Max Moisture	0.20	%	
Middle Temperature	170 to 180	°C	
Front Temperature	150 to 160	°C	
Nozzle Temperature	180 to 190	°C	
Processing (Melt) Temp	160 to 165	°C	
Mold Temperature	10.0 to 15.0	°C	
Extrusion	Nominal Value	Unit	
Suggested Max Moisture	0.20	%	
Melt Temperature	160 to 165	°C	

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#### Recommended distributors for this material

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