Biocycle 189D-1

Biodegradable Polymers

Biocycle

Message:

Characteristics of the product:
Yellowish white powder, with a high degree of purity of over 99.5% and humidity below 0.3%. Weight-average molecular weight of approximately 600,000 g/mol.
Basic Raw Material: Saccharose
Microorganism: Bacteria of the alcaligene genus
Obtention Process:
Biosynthesis of the polymer by aerobic fermentation and extraction purification of the polymer through natural solvent.
Advantages:
The polymer is totally biodegradable and renewable with its final decomposition in water and carbon dioxide through the action of microorganisms in natural environment; When placed in composting units, the polymer quickly decomposes and doesn't affect the quality of the compost produced. The polymer can be dyed by using biodegradable masterbatches in conventional dying processes. The polymer can be printed with paints and conventional printing processes, using surface treatment which are also conventional.

General Information			
Features	Biodegradable Compostable Excellent Printability High Purity Paintable Renewable Resource Content		
Appearance	Yellow		
Forms	Powder		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.30	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	20	g/10 min	ASTM D1238, ISO 1133
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			
Yield	36.0	MPa	ASTM D638
Yield	38.0	MPa	ISO 527-2
Tensile Elongation (Break)	2.0	%	ASTM D638, ISO 527-2
Flexural Modulus			
--	3800	MPa	ASTM D790
--	3850	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
--	34	J/m	ISO 180/A
--	36	J/m	ASTM D256

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	125	°C	ASTM D648
0.45 MPa, Unannealed	123	°C	ISO 75-2/B
1.8 MPa, Unannealed	75.0	°C	ASTM D648
1.8 MPa, Unannealed	74.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	137	°C	ASTM D1525
--	136	°C	ISO 306/A120
Peak Melting Temperature	165 to 170	°C	ASTM D3418

Recommended distributors for this material

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