Biocycle 1000

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
	Excellent Printability
	High Purity
	Paintable
	Renewable Resource Content
Uses	Agricultural Applications
	Appliances
	Automotive Applications
	Handles
	Packaging
	Personal Care
	Sporting Goods
	Stationary Supplies
	Toys
	Wire & Cable Applications
Appearance	Yellow
Forms	Powder
Processing Method	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	6.5	g/10 min	ASTM D1238, ISO 1133

Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			
Yield	32.0	MPa	ISO 527-2
--	32.0	MPa	ASTM D638
Tensile Elongation			
Break	4.0	%	ASTM D638
Break	3.5	%	ISO 527-2
Flexural Modulus			
--	2200	MPa	ASTM D790
--	2250	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
--	28	J/m	ASTM D256
--	26	kJ/m^2	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed	117	°C	ASTM D648
0.45 MPa, Unannealed	115	°C	ISO 75-2/B
1.8 MPa, Unannealed	65.0	°C	ASTM D648, ISO 75-2/A
Vicat Softening Temperature	135	°C	ASTM D1525, ISO 306/A120
Peak Melting Temperature	170 to 175	°C	ASTM D3418

Recommended distributors for this material

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