Technical datasheet

PHAx 11987

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PHA polymers are a thermoplastic resin that can be used in injection molding, thermoforming and extrusion. PHA is made by bacterial fermentation and is 100% biobased and 100% biodegradable. They have a potentially large design space and resulting application options, if properly applied. And this is where PHAradox comes in. By blending different PHA polymers, and by possibly adding some sustainable fillers or fibers, PHAradox finetunes its PHA formulations to match perfectly with the customer needs.

MATERIAL PROPERTIES

Physical properties	Unit	Value	Method
Tensile modulus	MPa	1390	ISO 527
Tensile strength	MPa	24	ISO 527
Tensile strain at break	%	9,9	ISO 527
Flexural modulus	MPa	1163	ISO 178
Flexural strength	MPa	38	ISO 178
Charpy notched impact strength	kJ/m2	8,7	ISO 179-1/1 eA
Charpy unnotched impact strength	kJ/m2	NB	ISO 179-1/1 eU
HDT (0,45 N/mm2)	ºC	TBD	ISO 75

Processing settings

Sections	Temperature	Notes
Drying	80 - 90 ºC	2 - 3 hours
Zone 1	150 ºC	
Zone 2	155 ºC	Please try to stick to these temperatures (or lower) as the materials starts chain-scission (degradation) at higher temperatures.
Zone 3	155 ºC	
Zone 4	160 ºC	
Zone 5	165 ºC	
Mold	60 - 70 ºC	Mold temperature is very important to initiate crystallization of the material. Without increased mold temperature, the material won't crystallize and will probably stay stuck in the mold.

Keep residence time in barrel as short as possible, and shear as low as possible, to prevent degradation.

Disclaimer
The product- and technical information provided in this datasheet is correct to the best of our knowledge. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The information only relates to the specific product and the material properties.

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