

Technical datasheet

REGEN™ Expack



Date of issue: May 26th, 2022
Version: v1.4

Product Description

REGEN™ is a PHA compound that is tailored for extruded tubes, sheets, and films. It is certified biobased and compostable in compliance with ASTM D6400 & ISO 17088 standards.

Product Characteristics

Processing Method:	Extrusion
Typical Customer Applications:	Sheet & films
Product appearance:	Pellets
Color:	Natural (Off white)

Typical Properties

	Typical Properties	Method	Unit	Value
Physical	Density	ASTM D792	g/cm ³	1.24
	Melt flow index (2.16kg @ 190°C)	ASTM D1238	g/10min	3-5
	Glass transition temperature	ASTM D3418	(°C)	50
	Peak melt temperature	ASTM D3418	(°C)	170
Mechanical	Tensile modulus	ASTM D638	MPa	1430
	Tensile strength	ASTM D638	MPa	24
	Elongation at break	ASTM D638	%	45
	Flexural modulus	ASTM D790	MPa	1050
	Flexural strength	ASTM D790	MPa	22
	Izod notched impact strength	ASTM D256	J/m	58
	Heat deflection temperature (0.455 MPa)	ASTM D648	(°C)	54

Processing Conditions

If not hermetically sealed in bags, pre-drying is recommended for 6-8 hours at 60°C in a desiccant hot air dryer.

It is recommended that the equipment be cleaned and purged using a polyolefin or a purging compound. Recommended temperature profile for Expack processing is listed in the following table:

Processing recommendations	
Throat	20-40°C
Feed zone	155-165°C
Melt zone	165-175°C
Mixing & Conveying	175-185°C
Die	175-185°C

For cast sheet extrusion, the rolls temperature should be set in the range of 25-60°C. The use of additives such as melt strength enhancers might be required for blown film extrusion.

At the end of the run, it is recommended to purge thoroughly using a polyolefin or purging compound.



Disclaimer: The technical data contained on this data sheet is furnished without charge or obligation and accepted at the recipient's sole risk. This data should not be used to establish specifications limits or used alone as the basis of design. The data provided is not intended to substitute any testing that may be required to determine fitness for any specific use.

Technical datasheet

REGEN™ Inpack



Date of issue: May 4th, 2022
Version: v1.3

Product Description

REGEN™ Inpack is a PHA compound suitable for injection molding applications. It is certified biobased and compostable in compliance with ASTM D6400 & ISO 17088 standards.

Product Characteristics

Processing Method:	Injection molding
Typical Customer Applications:	Containers, caps
Product appearance:	Pellets
Color:	Natural (Off white)

Typical Properties

	Typical Properties	Method	Unit	Value
Physical	Density	ASTM D792	g/cm ³	1.23
	Melt flow index (2.16kg @ 190°C)	ASTM D1238	g/10min	8-10
	Glass transition temperature	ASTM D3418	(°C)	50
	Peak melt temperature	ASTM D3418	(°C)	170
Mechanical	Tensile modulus	ASTM D638	MPa	2400
	Tensile strength	ASTM D638	MPa	32
	Elongation at break	ASTM D638	%	74
	Flexural modulus	ASTM D790	MPa	1640
	Flexural strength	ASTM D790	MPa	49
	Notched Izod impact	ASTM D256	J/m	33
	Heat deflection temperature (0.455 MPa)	ASTM D648	(°C)	68

Processing Conditions

If not hermetically sealed in bags, pre-drying is recommended for 6-8 hours at 60°C in a desiccant hot air dryer.

It is recommended that the equipment be cleaned and purged using a polyolefin or a purging compound. Recommended temperature profile for REGEN™ Inpack is listed in the following table.

Mold temperature of 70°C-90°C is also recommended for a crystalline finished product.

At the end of the run, it is recommended to purge thoroughly using a polyolefin or purging compound.

Processing recommendations	
Throat	20-40°C
Feed temperature	155-165°C
Compression section	165-175°C
Metering zone	175-185°C
Nozzle	175-185°C
Melt temperature	175-185°C



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