

# BY-PRODUCTS

## General Properties

Industrial companies try for years to add value more efficiently to their wastes or by-products. The use as a filler in a biopolymer matrix can be one of these valorization route for some of them.

Such materials are mainly dedicated to injection molding applications but can also be used in extrusion or thermoforming.

# NaturePlast

The natural evolution of plastic

## Applications

**Processes:** injection molding, extrusion, thermoforming.

**Markets:** packagings, horticulture, technical parts, sports and leisures, aesthetic parts, etc.

## Properties

- Depends of the nature of the by-product.
- Natural aspect.

Grade	By-product nature	Density	MFI (g/10 min at 190°C; 2.16 kg)	Flexural modulus (MPa)	Tensile modulus (MPa)	Tensile elongation at break (%)	Unnotched Charpy impact resistance (kJ/m <sup>2</sup> )	Thermal resistance (°C)
<b>Test ISO</b>		<b>1183</b>	<b>1133</b>	<b>178</b>	<b>527</b>	<b>527</b>	<b>179</b>	<b>75-2 ou 306</b>
<b>BIOPOLYESTERS BASED</b>								
<b>NPC 203</b>	Olive stone	1,27	20 – 25	940	1170	23	24	110 (Vicat A)
<b>NPC 204</b>	Algae	1,33	>30	1300	1300	8	21	109 (Vicat A)
<b>NPC 205</b>	Leather	1,27	4	700	820	15	121	101 (Vicat A)
<b>NPC 207</b>	See shell	1,50	19	1300	1500	7	55	110 (Vicat A)
<b>NPC 209</b>	Cork	<1	0,5	580	600	11	16	108 (Vicat A)
<b>NPC 210</b>	Rice hull	1,15	17	1420	1670	5	13	107 (Vicat A)
<b>BIOELASTOMERS BASED</b>								
<b>NPC 206</b>	Leather	1,19	4	/	40	120	No Break	/
<b>NPC 208</b>	See shell	1,35	11	/	13	592	No Break	/
<b>PLA BASED</b>								
<b>NPC 215</b>	Leather	/	/	/	2900	7	27	50 (HDT B)

Several others references are available; Please come back to us to get information

## NaturePlast

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