



Redesigning plastics. For good.

Bio solutions for high
performance containers

Plantura

The impact of humanity on our planet is now top of the environmental agenda. Waste management, greenhouse gas effects and the threat to biodiversity all require urgent actions to ensure that life remains sustainable. Even though significant efforts have already been made, still more efficient solutions are



Solutions for the zero waste transition

needed in order to further protect our environment. Food packaging is a key area for improvement, thanks mainly to the huge market for single-use applications.

BENVIC material innovation is showing a way forward.

Solutions such as product recycling require complex infrastructures for collecting, sorting and regeneration, and also a high level of consumer cooperation. This makes for inefficient and high-cost systems.

But when food packaging is simply treated as food waste then a significant change of paradigm is enabled and compostability becomes the answer. The composting process makes things happen and also dramatically reduces the waste production per capita. Bio-based materials are now urgently needed for new food packaging that has a proven level of compostability.

BENVIC is therefore path-finding the way to successful compostable manufacturing, and is introducing the bio economy to the circular economy with a dedicated biopolymer range called PLANTURA®. Changing over from existing materials to biopolymers requires extensive compounding knowledge in order to set up the right properties for materials processing and to keep the processing costs under control.

BENVIC is proposing a set of solution able to meet challenge for engineered containers used for food industries. Catering containers and coffee pods are one of those where solutions provided meet the following requirements with one of the highest level of process ability.

A biobased proposition improves final product value by focusing consumer choice without compromising on technical features:

Mechanical resistance: pressure and dimensional stability must be attained

Service behavior: no failure in use when compared to other materials

Low emission: no impact inside the coffee in terms of substance transfer and organoleptic

Barrier compatible: integrated inside the manufacturing process with oxygen and water vapor barriers to meet shelf life

Compostability: suitable for industrial or home composting

Food compatible : containing no hazardous substances content



High temperature compliance for food warming compatibility

PLANTURA proposition

BENVIC's extensive biopolymer compounding has succeeded in meeting all these requirements; providing a dedicated range of PLANTURA® based on various bio polymers such as PLA, PBS and PBAT.

A proven range from BENVIC is now available with the following features



Industrial **compostable**.



Biobased solution.



Range for **injection** moulding and **thermoforming**.



Designed for **multilayer** process, integrating **oxygen and water barrier**.



THF free content and low emission properties for a safe solution.



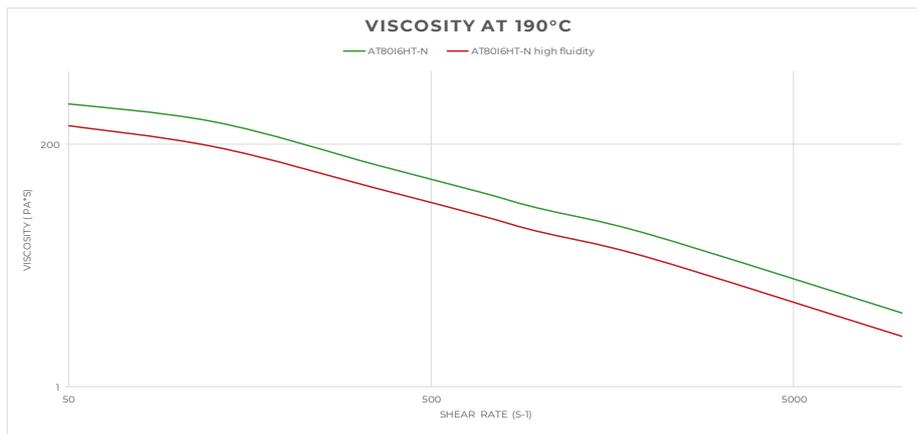
High temperature compliance to meet food warming up to 100°C



Parametric flow behaviour for optimizing injection cycle time.

Parametric flow behaviour

The new BENVIC PLANTURA® range now significantly improves the processability and the flow properties of these biopolymers in order to optimize the product cycle time – especially when compared to similar biopolymers. It's not just a matter of improving mold flow behavior, but also integrating the biopolymer within existing molding systems with the potential to formulate further bespoke grades.



Example for standard high temperature viscosity grade (AT8016HT-N) and improved viscosity grade (AT8016HT-NHi fluidity)

for injection molding

	Multilayer	Industrial compost ability (EN13432)	Oxygen Water barrier	Food contact	THF level	Density	Melt flow index
AT8016-N	○		○	○	<0,12 mg*kg	1.43	12
AT8016 HT-N	○			○	<0,12 mg*kg	1.43	12



for thermoforming

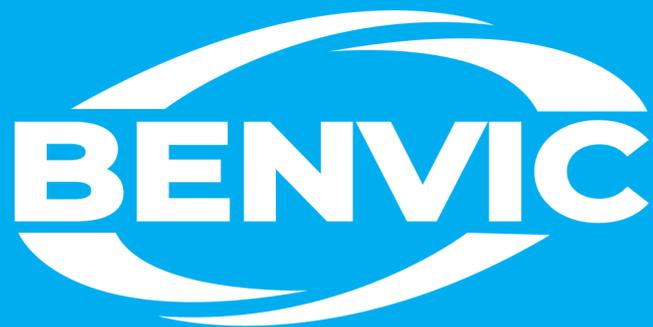
	Multilayer	Industrial compost ability (EN13432)	Oxygen Water barrier	Food contact	THF level	Density	Melt flow index
AT8016 HT-N (E)	External		○	○	Low	1.43	7
E67C5SC-N	Internal		○	○	Free	1.38	11



Support

Benvic as specialist of PVC compounding supports customers in the product design and associated manufacturing process. For any support, please contact you closest BENVIC sales representative or at benvic.com.

Technical data sheets, processing recommendations and other supporting data are available upon demand. The information given here above is general commercial information, cannot be considered as a specification and can change without prior notice. Benvic also supports customers through continuous adaptation of its products: please contact your nearest sales representative for technical support.



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