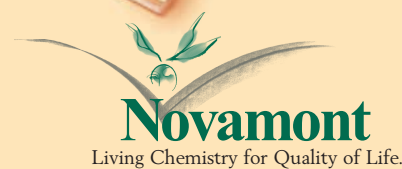


From maize, Carrier Bags and Waste Bags.



www.novamont.com

Mater-Bi™ is the innovative bioplastic obtained from renewable sources. It is fully biodegradable and compostable and ideal for making carrier bags of any size and shape. These can be reused for collecting organic waste along with Mater-Bi™ waste bags and bin liners, helping to optimise the separate collection of organic waste. Mater-Bi™ can be made into a high quality film using traditional LDPE machines. Extrusion temperatures are lower, and any scrap can be recycled using techniques similar to those for PE.



This paper is produced entirely with recycled fibers.

Mater-Bi™ Film for Carrier and Waste Bags.

Mater-Bi™, the bioplastic made from renewable and non-genetically-modified vegetable starch, can be processed in the same way as traditional materials using standard polyethylene processing equipment.

Different grades of Mater-Bi™ are available for making film for specific applications. Supermarket carrier bags and loop-handle bags made from Mater-Bi™ film are as well particularly suitable for the separate collection of organic waste. There is also a wide range of specific Mater-Bi™ grades suitable for making bags for collection of food scraps and green yard waste to be composted.

Mater-Bi™ Film compared with in confronto con LDPE

Test	Standards Method	Unit	Mater-Bi™	LDPE
MFI	ASTM D1238	g/10 min	2-4	0,1-6
Breaking load	ASTM D882	MPa	20-50	20-30
Breaking extension	ASTM D882	%	200-600	150-600
Young's modulus	ASTM D638	MPa	100-600	150-300
Start of: -Tearing -Propagation	ASTM D1938	N/mm N/mm	20-120 20-120	70 70
Water vapour Permeability	ASTM E96	gr 30µm/m ² 24 h	250-1000	15

Easy to print on, quick to seal...

Mater-Bi™ film can be printed using water or solvent-based inks, without the need for corona discharge or flame treatment. The welding processes used in making bags from Mater-Bi film are similar and as quick as the ones used for PE.

... and to recycle...

The Mater-Bi™ bag, which comes from renewable, biodegradable and compostable sources, is the ideal solution for handling organic waste. After being used and reused to carry shopping, the Mater-Bi™ bag can be used yet again, this time to collect food waste. In a ventilated bin, the Mater-Bi™ bag will allow evaporation of the water content, thanks to its breathability, thereby reducing weight of the waste up



to 20% and eliminating the problem of nasty smells. Like the organic waste it contains, the Mater-Bi™ bag naturally turns into compost in all types of composting plants, from home composting to rotary fermenting reactors, without creating additional waste.



...and for saving.

Therefore, the Mater-Bi™ bag produces a double saving: for the consumer who buys only one bag for two uses and for the waste collection companies. The biodegradable bag or bin liner helps to achieve exceptional levels of purity during the collection phase, optimising the transfer of the organic waste to the composting plants without producing other problem waste. If used together with a ventilated dustbin, thanks to its breathability the Mater-Bi™ bag also allows a significant reduction in the weight of the waste to be collected and transported, resulting in genuine economic and environmental savings at all stages of collection, transport and composting.

Novamont and Sustainable Development.

Since it was founded in 1989, Novamont has pursued Sustainable Development and with Mater-Bi™, has made a product whose versatility and environmental characteristics are unique insofar as:

- it comes from renewable sources
- it is biodegradable and compostable
- it is ready for use in your applications to maximise performance and minimise environmental impact.

As the promoter of the project "Living Chemistry for Quality of Life" with the objective to involve and stimulate all parties connected with environmental policies, Novamont is always ready to share experience and know-how to help you achieve improved environmental sustainability and technical performance with your products.