



## NOVAMONT S.P.A.

### Foundation

- Novamont is an industrial company headquartered in Novara (Italy), worldwide leader in the production of bioplastics starting from renewable materials.

### Seats

- Novara, Terni, Piana di Monte Verna

### Turnover

- Approx. 135 million € (2013)

### Employees

- About 280 (2013)

### Activities

- Development and production of new biodegradable products based on renewable raw materials

### Fields of application

- Farming, retail purchasing, disposable tableware, separate waste collection, industry (personal hygiene and cosmetics, automotive, packaging, animal accessories)

### Key bio-based products

- Mater-Bi®
- Origo-Bi®



### Chemistry at the Service of a System-Based Economy Company

Novamont is an industrial company whose roots lie in the Montedison School of Materials Science and which was set up in 1989 with a view to implementing the ambitious project of some research workers from the large industrial chemistry group: to integrate chemistry, agriculture and the environment. Ever since it was set up, Novamont has encouraged a new model of sustainable development and the transition from a product-based economy to a system-based economy, from a dissipative to a conservative approach to resources, through the use of renewable resources for the production of bioplastics for specific applications with a low environmental impact.



Mater-Bi®: agricultural applications

### Vision

The challenge for the future is to develop an innovative production and consumption model that conciliates social, economic and environmental sustainability to ensure the well-being of the next generations.

### Mission

"Living Chemistry for Quality of Life" Developing materials and bio-chemicals through the integration of chemistry and agriculture, by starting up third-generation biorefineries in the area and providing application solutions that ensure efficient use of resources throughout their entire life cycle, with advantages for the social, economic and environmental system.

### Products

Mater-Bi® is a family of innovative bioplastics based on plant components and biodegradable polymers totally or partially obtained from renewable resources. Under the trademark Mater-Bi® Novamont produces and sells various kinds ("grades") of biopolymers. The plant components are of various kinds and are all extracted from plantations that do not exploit virgin or deforested land. Vegetable oils used as a raw material for polymers come from non-genetically modified crops (no use is made of palm oil or soybean oil).

Origo-Bi® is a family of polyesters obtained from vegetable oils. They are intermediate products for the chemical industry used in the production of Mater-Bi® to improve its technical, economic and environmental characteristics.



Mater-Bi®: disposable tableware



### Properties and environmental profile of Mater-Bi®

The properties of Mater-Bi® grades vary considerably. As regards their mechanical properties, the products range from those with a low modulus and extremely high toughness to stiff products that tend to be brittle. As for their transparency, the products range from lactescent to transparent. All commercial grades may be transformed using blow moulding, casting, extrusion/thermoforming and injection moulding machines for traditional plastics. With regard to their biodegradability, the commercial products are all certified in accordance with the European and international standards by accredited Certifying Authorities that guarantee biodegradation in various disposal environments. Mater-Bi® waste may therefore be recovered through "biological recycling" together with kitchen and garden waste. Biodegradation in household compost and soil is also guaranteed for many grades.

The products and processes are constantly improved using the "Life Cycle Assessment" (LCA) approach. All grades of Mater-Bi® realize their full environmental potential when they are used in applications in which their peculiar performance brings advantages to the system both during their use and at the end of their life.

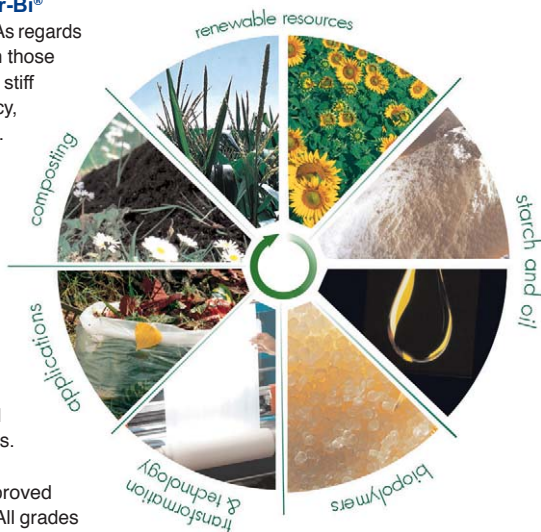
### Applications

Novamont concentrates its application development activities in fields in which its products can make a tangible contribution to the efficiency with which the resources are used. This principle is valid both for the field of biodegradable and compostable bioplastics and for that of durable bioplastics. In the former case, Novamont has developed applications in which biodegradability and compostability represent an added value (e.g. catering products "contaminated" with leftovers, which is unlikely to be recycled or would be anti-economical to recycle) and/or serve a function (e.g. mulch films). An application that belongs to the latter category is the use of Mater-Bi® as a biofiller for tyres (as a partial replacement of carbon black and silicon), in which the fundamental aspect is what Mater-Bi® can do to minimize fuel consumption and CO<sub>2</sub> emissions in the transport sector.

The main fields of application of Mater-Bi® are: farming, retail purchasing, disposable tableware, separate waste collection, industry (personal hygiene and cosmetics, automotive, packaging, animal accessories).



Mater-Bi®: disposable tableware



Our mission: living chemistry  
for quality of life

#### Contact

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