

## **MARINE LITTER: NOVAMONT PRESENTS THE RESULTS OF ITS SCIENTIFIC RESEARCH AT THE UN ENVIRONMENT ASSEMBLY IN NAIROBI (KENYA)**

*Nairobi, 5 December 2017* – During “Together against marine litter and micro-plastics”, the high-level side event held at the UN Environment Assembly taking place in Nairobi (Kenya), Christophe De Boissoudy, managing director of Novamont France, illustrated the vision of the Italian research company that has been developing and producing biochemicals and biobased, biodegradable and compostable plastics since 1991.

For more than 25 years Novamont has been working to define a model to provide innovative solutions to the problems posed by plastics when they are used for certain applications that have a high risk of polluting bio-waste or ending their life in the environment.

This is why Novamont is developing its activity in a circular economy model by repositioning biobased and biodegradable plastics in the larger context of the need to recover organic waste for its return to soil through compost. The inherent biodegradability of plastics must be related to each specific environment. This is the reason why, in order to avoid misleading communications, it is essential that the term “biodegradable” is associated only with the relevant degradation environment (where) and its related conditions (how much and how long).

According to Mr De Boissoudy, “Before talking about biodegradation in the marine environment, it is important to remember that 80% of the plastics found at sea is of terrestrial origin. Therefore, we need an efficient waste management in the mainland in order to avoid leakage and we have to block litter before it reaches the sea. The marine environment must be protected in the mainland. Waste must be sorted, collected, recycled, biodegraded in the mainland. Thus,

paradoxically, compostability and biodegradability in soil is even more important than biodegradability in the sea, for the sake of the marine environment”.

Separate collection of waste is key and biodegradable plastics have been widely studied over the last 20 years. Many national and international standards have been adopted to show biodegradability in industrial composting, home composting and soil (e.g. EN 13432, ASTM D6400, ISO 18606, EN 17033). These standards define the ability of plastics to biodegrade totally (how much) under different conditions without adverse effects towards the environment., in industrial composting, home composting, in soil.

Sample of different MATER-BI<sup>®</sup> - Novamont bio-based bioplastics - have been exposed to marine sediments and biodegradation followed in the laboratory measuring the metabolism of marine microbes fed with the plastic. Biodegradation resulted to be higher than 90% (absolute or relative to the reference material) in less than one (1) year. The biodegradation results have been verified by Certiquality within the EU pilot programme "Environmental Technology Verification (ETV).

These results obtained in laboratory have been further confirmed by Nora-Charlotte Pauli, Jana S. Petermann, Christian Lott, Miriam Weber in “ROYAL SOCIETY-OPEN SCIENCE: Macrofouling communities and the degradation of plastic bags in the sea: an in situ experiment”: “Contrary to PE, the biodegradable plastic showed a significant loss of tensile strength and disintegrated over time in both habitats. These results indicate that in the marine environment, biodegradable polymers may disintegrate at higher rates than conventional polymers. This should be considered for the development of new materials, environmental risk assessment and waste management strategies” (<http://rsos.royalsocietypublishing.org/content/4/10/170549>)

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*The Novamont Group is world leader in the development and production of bioplastics and biochemicals through the integration of chemistry, the environment and agriculture. With 600 employees, the Group posted sales of €170 million in 2016 and made continuous investments in research and development activities (20% of its staff) and has a portfolio of around 1,000 patents. The group has its headquarters in Novara, a production facility in Terni and research laboratories in Novara, Terni and Piana di Monte Verna (CE). The Novamont subsidiaries are based in Porto Torres (SS), Bottrighe (RO), Terni and Patrica (FR). Active in Germany, France and the United States through commercial offices and a representative*

*office in Brussels (Belgium), Novamont operates through own distributors in Benelux, Scandinavia, Denmark, the United Kingdom, China, Japan, Canada, Australia and New Zealand.*

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