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## **WHAT IS MATER-BI®?**

### **Biodegradable and Compostable by nature.**

Mater-Bi® is the first family of biopolymers that uses substances obtained from vegetables, like maize starch, whilst preserving the chemical structure generated by photosynthesis. A variety of molecular superstructures with a wide range of properties are created by “complexing” the starch with variable amounts of biodegradable complexing agents, which are derived from renewable, synthetic or mixed sources. Mater-Bi® is a family of materials engineered to adapt to the various levels of performance that the market demands. Manufactured in the factory in Terni, Mater-Bi® comes in granular form and can be processed using the most common transformation techniques to make products whose characteristics are similar, or even better than those of traditional plastics, but which are perfectly biodegradable and compostable. After use, products made of Mater-Bi® biodegrade in a single composting cycle.

### **As versatile as plastic.**

Mater-Bi® can be used in an infinite number of ways and in variety of applications. The extreme flexibility of the production facility in Terni means that the Mater-Bi® output can be customised to respond to the most varied demands: from agriculture to manufacturing, from packaging to disposable articles, to toys, various accessories and biofillers.

### **From the most innovative research**

In nature, starch comes in crystalline form with linear (amylose) and branched (amylopectin) molecules. By breaking the original structure of the starch Novamont researchers were able to create a new supermolecular order by forming complexes between the amylose and natural or synthetic molecules. These complexes create a new crystalline order which increases the water-resistance and changes the mechanical properties of the original starch but without modifying its chemical structure.