



The continuous **research and innovation** that have always distinguished Intercap were recently rewarded with excellent results in the field of co-extruded polylaminate, a multi-layered, self-supporting material that is produced through the direct co-extrusion of raw material (aluminium and polyethylene) and that is completely free of glue and adhesion promoters.

Polynature is an innovative material that is unique in all the world. It is biocompatible, has zero negative impacts and the internal polymer is 100% vegetable origin. Intercap patented the material in collaboration with G&A Paradigma and its in-house team of specialised engineers and researchers who worked tirelessly to improve the characteristics of the previous version, eco3.1.

Principle characteristics:

1. Polymer is **100% vegetable origin and biocompatible**;
2. **free of glues** - the co-extruded polylaminate is achieved through direct coupling between aluminium and polyethylene;
3. **energy savings** during production equivalent to 20%, which translates into low environmental impact;
4. **certified for contact with foodstuffs** in compliance with all European and non-European regulations. Migration tests on the polylaminate verify the absence of harmful or hazardous substances such as Bisphenol A, heavy metals and aromatic substances (Ministerial Decree 21/3/73 and Regulation (EU) 10/2011).

Polynature is **100% recyclable**. Since the polyethylene used is first-rate, it can be recycled for use in other industrial sectors (e.g., automotive industry, construction, metal-mechanics, etc.). As the aluminium is suitable for use with foodstuffs, has a definite size and guaranteed strength, it too can be reused in other sectors (e.g., production of window-units or carpentry).

The waste and scraps from production therefore are completely recyclable, just as our closures made with Polynature are. Indeed, once used, the two raw materials can be separated and put back on the market through the cutting-edge waste disposal plants that many municipalities are equipped with.

Why choose Polynature? First of all, because every component is certified for contact with foodstuffs. Second, because this type of polylaminate uses **bio-plastic** obtained from renewable and biodegradable raw materials. It is also important to remember that during the production cycle for Polynature polylaminate, there is no formation of CO₂ but rather only electricity consumption. Lastly, during the production process of a capsule, there is an even greater reduction in the amount of **CO₂ emissions** into the environment through our innovative **solvent**

recovery plant employed in the painting stage. Consequently, 20% less energy is consumed, which represents a relevant reduction.

Polynature is soft and pliant while at the same time resistant, making it possible to work it into all of the thicknesses typical of a traditional poly laminate. Additionally, the capsule retains its aesthetic and hygienic functions over time, ensuring effectiveness until its final disposal.

In a short time, Intercap will certify the food compatibility, the traceability of all the production chain of Polynature and its environmental sustainability. The certification is issued by the European bureau IMQ ECO.