

Partitalia: card in PVC biodegradabile

SMART BIN READING TECHNOLOGY GOES GREEN

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New Biodegradable PVC RFID Smart Cards from Partitalia

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The company said that the new products are the result of a new R&D team dedicated to the study of innovative materials. Through technical laboratory and ecosystem compatibility trials, it develops products that comply with the rules of the circular economy and are closer to the needs of the market.

Partitalia went on to explain that while on one hand, cards are in great demand (think of the mass diffusion of credit cards, access control badges, gift cards and loyalty cards used in the retail and large-scale distribution sector), on the other hand, a growing number of companies want cards made of biodegradable PVC to aim for the eco-sustainability of their products and to comply with European guidelines, with advantages also in marketing terms.

Biodegradable PVC

Standard PVC, a thermoplastic polymer comprising 57% sea salt and 43% crude oil, has always been the most commonly used material for the production of cards. It is a resistant and flexible raw material, but it has a significant impact on the environment when the time comes for it to be disposed of.

Partitalia noted the Green Book "Environmental problems of PVC", presented by the European Commission in Brussels in June 2020 which said: "When PVC waste is incinerated, it generates hydrochloric acid (HCl) in the exhaust gas that has to be neutralised".

That means that when incinerated the polymer releases dioxins and other organochlorides into the atmosphere. Therefore, Partitalia's decision to put a less polluting material on the market that better safeguards health.

Luca Del Col Balletto, CEO of the company explained how the project was born:

"At the start of the new millennium, the European PVC industry signed up to the ten-year Vinyl 2010 programme and in 2011 VinylPlus got off the ground; that is, the new PVC sustainable development plan that involves Europe and sees the participation of around 200 partner companies representing the sector.

This has prompted us to launch a Research & Development project on the materials used to print the cards at our factory."

Next Steps

The chemical composition of biodegradable PVC is characterised by the addition of additives that accelerate degradation in microbe-rich environments.

These additives are said to be particularly palatable to the micro-organisms normally present in trash that metabolise the substances of which the PVC is made, transforming the polymer into simple molecules (water, carbon dioxide, methane), biomass and inorganic compounds.

For this reason, cards made of biodegradable PVC decompose faster than the traditional material, already in the organic fraction. Instead, the technical performance is the same.

The company concluded by saying, "this journey we have set out on will continue over the coming two years: innovative services will be developed, eco-compatible products will be studied and bespoke solutions will be proposed with the aim of simplifying the industry 4.0 processes."



Luca Del Col Balletto, CEO Partitalia Srl.

