

**PRESS RELEASE**

**Biodegradable mulch sheets, compostable coffee capsules, shopping bags, paper-plastic laminated products. Sirmax Group makes its Ecomondo debut with an innovative bio-compound, contributing to the reduction of CO2 in the atmosphere.**

**"We are increasingly sustainable, with green products, proximity to our clients, and respect for the environment." – Massimo Pavin (CEO)**

*Rimini, 26-29 October 2021* – Sirmax Group makes its Ecomondo debut with highly technological and innovative sustainable solutions. The company from Cittadella (Padua) specializes in the production of polypropylene compounds, technopolymers, circular post-consumer compounds and bio-compounds for multiple sectors of application. For the 2021 edition of the Rimini trade show, the Group has fine-tuned its high-performance green product families. Backed by decades of experience and by the work of five Research Centers, Sirmax is now able to produce **compostable bio-compounds which are 100% biodegradable. It can also produce plastic derived from the mechanical recycling of post-consumer waste which can be used to create durable goods, and offers molding solutions that reduce the use of virgin plastic.**

**Sirmax's 100% biodegradable and compostable bio-compound**

Sirmax Group has developed **BIOCOMP®**, an innovative family of bioplastics made with raw materials obtained from both renewable and fossil raw materials. Biocomp is produced by Microtec, a Venice-based company acquired by Sirmax in 2019. It is produced in granular form using known technologies for the transformation of plastic materials, which have been specifically adapted to treat biodegradable and compostable polymers. **These granules can be used to make products with similar or even improved characteristics compared to traditional plastics.** However, unlike traditional plastics, they are completely biodegradable and compostable as required by standard EN 13432.

BIOCOMP® finds many applications in the flexible and rigid packaging sector, **from large-scale distribution and the agri-food sector to catering and non-returnable packaging.** Its use is therefore not limited to takeaway bags, but also includes compostable packaging for mozzarella, ice cream, and solid and liquid foods, refrigerator bags, laminated paper packaging for the sausage industry, and packaging and accessories for clothing and fashion items. It also extends to the production of plates, glasses, trays and cutlery for the hospitality sector, and freezer and ice cubes bags.

In the agricultural sector, **Biocomp® mulching sheets** made with a completely biodegradable and compostable material are being tested in the field. Sirmax Group offers them as a replacement for traditional polyethylene sheets. This product – which is now in the approval phase – can be milled with crop residues at the end of the crop cycle, contributing to soil fertilization.

*"We are also working on other projects," says Massimo Pavin, president & CEO of Sirmax Group . "In addition to mulching, a topic that the new generation of agricultural entrepreneurs is particularly sensitive to, we are also looking to the coffee capsule sector. Today, the use of capsules has become increasingly popular. During the pandemic, home coffee machines sales increased noticeably. Capsules are currently made of aluminum or traditional plastic. Sirmax is studying a compostable bioplastic that transforms the capsule into fertilizer enriched with coffee residues, which is excellent for plants."*

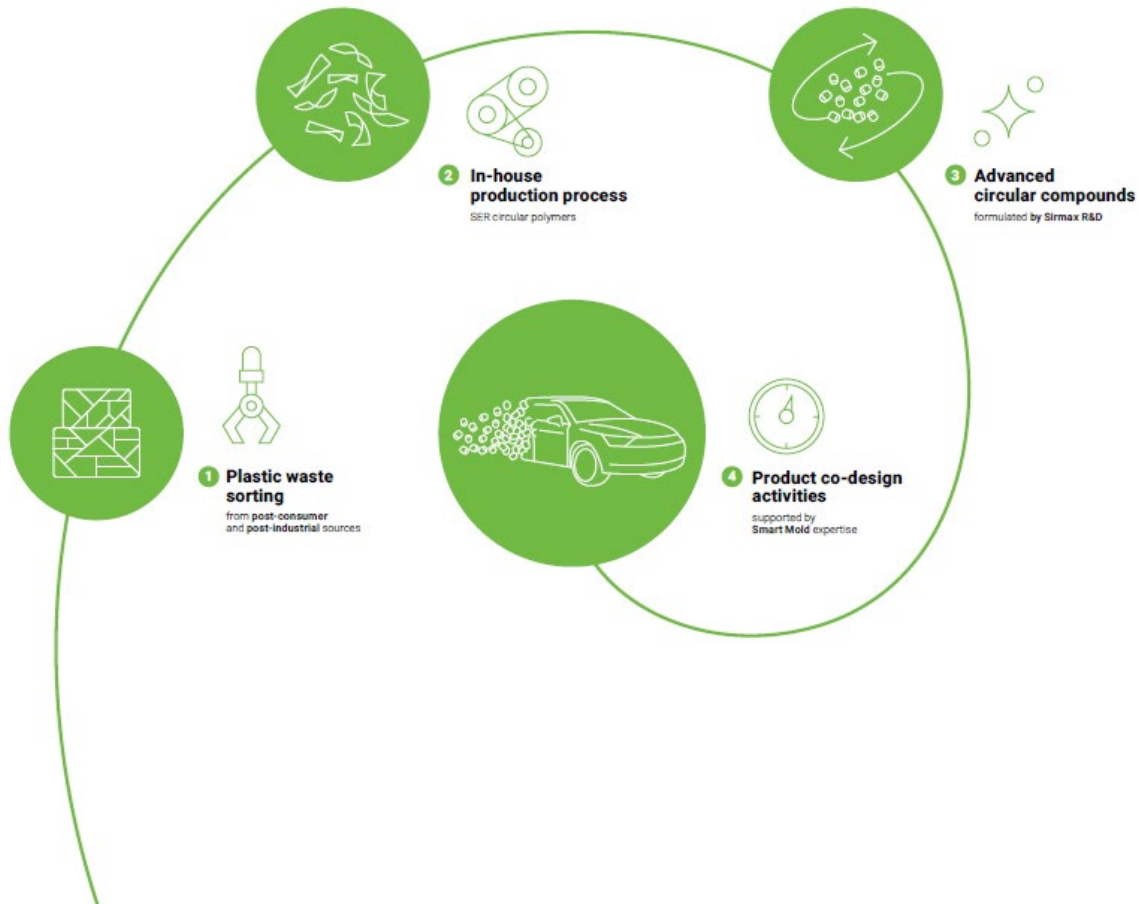
*And there is more. "The group can count on a stake in a family-run paper factory," continues Massimo Pavin, "Which already boasts significant agreements for the supply of food and non-food packaging. In recent months we have been considering the possibility of adding paper to our offer of traditional plastics, recycled plastics, and biopolymers. Laminates are unpopular today as it is difficult to separate materials at the end of their life. However, by waterproofing paper with a compostable biopolymer, they could be an ideal solution for products such as disposable cups, deli paper, and fishmonger paper."*

## **Circular economy: Post-consumer plastic gets a second lease of life**

**Sirmax Group process post-consumer plastic and gives life to products that, despite coming from the collection of urban waste, can be used to produce durable goods.** Sirmax's added value is in the plastic finishing process. Its recycled compound is formulated to deliver high mechanical and technical capabilities. Fiberglass, talc or other components are added to the granules in order to make the material resistant, performing and as reliable as virgin plastic. This little "miracle" is marketed as the Green ISO® compound family.

Sirmax completes its product/service offer with a patented surface treatment for plastic injection molds developed by Smart Mold, an engineering company under the Sirmax Group. This **surface treatment makes filling the molds easier by allowing decreased injection pressure.** By their very nature, recycled materials have a higher and more variable viscosity than virgin materials, and this limits their use. Smart Mold patents open up new possibilities for post-consumer plastic, with a lower environmental impact. Smart Mold focuses on reducing plastic consumption within a product by using technologically advanced raw materials. By combining Sirmax's most performing materials and Smart Mold's surface treatments, **the thickness of many structural components can be significantly reduced, leading to a reduction in the product's weight and, therefore, in the consumption of virgin plastic.**

## The 4 phases of the plastic-enhancement process:



## Sirmax's products contribute to CO2 reduction

Sirmax Group produces compounds that contribute to the reduction of CO2 emissions. **This is demonstrated by a Life Cycle Assessment (LCA) study carried out by Spinlife, a company of the University of Padua.** The study focused on two polypropylene compounds intended for the automotive and household appliance sectors: Isofil<sup>®</sup>, produced from virgin polypropylene, and Green Isofil<sup>®</sup>, a post-consumer recycled plastic material containing 33.8% Serplene<sup>®</sup> produced by SER, a Sirmax company based in Salsomaggiore Terme which specializes in the mechanical recycling of post-consumer plastic. Both products are mixed with mineral fillers, coloring masterbatches and other additives in different percentages.

Different impact categories were examined: The protection of human health and ecosystems in relation to the extraction of minerals and fossil fuels, the potential impact of acidifying substances on soil and air, the depletion of stratospheric ozone, climate change linked to greenhouse gas emissions, the impact on the environment from the emission of nutrients into the air (nitrification), photo-oxidant formation, and quantification of the potential for deprivation of water resources. The

analysis shows that **replacing virgin polypropylene with post-consumer recycled material can in many cases lead to half the carbon dioxide emissions.**

*"Today Sirmax is an all-round sustainable group," concludes President Pavin. "The investments we made in the last two years have given us the capacity to treat up to 45,000 tons of polypropylene and polyethylene from post-consumer packaging, turning this waste into compounds that the household appliance and automotive industries will transform into components with a life cycle of many years. Our goal is to create valuable cycles using knowledge entirely developed by Sirmax and shared with end clients. This is the logic on which our strategic choices have always been based and which guided the acquisition of SER and Microtec, as well as the strengthening of the Research and Development departments and the "opportunity to market" business unit. This path is in line with European directives and with the vision of our partners, to whom we wish to convey the message that we are close to our territory and our environment, but also that we have the ability to improve their processes and products".*

## **Sirmax Group**

*Sirmax Group, with headquarters in Cittadella (Padua), is the leading independent European manufacturer (and among the top global manufacturers) of polypropylene compounds used across all sectors: automotive, household appliances, power tools, household, construction and furniture. Active since the 1960s, it now has 13 production plants: Six in Italy – Cittadella, Tombolo, Isola Vicentina, San Vito Al Tagliamento, Salsomaggiore Terme, Mellaredo di Pianiga – two in Poland (2006-2019), one in Brazil (2012), two in the USA (2015-2020) and two in India (2017), as well as a sales office in Milan with branches in France, Spain and Germany. Sirmax has acquired significant market shares in Europe, North and South America and Asia, and has become a global benchmark for the international market. Among its clients are Whirlpool, Bosch-Siemens, Electrolux, Karcher, Philips, Honeywell, ABB, Technogym, Stellantis, Volkswagen Group, Daimler, De' Longhi, Haier, BMW, Audi, and Mercedes. In 2020, the Group had a turnover of 315 million euros, employing 700 people worldwide. Total turnover for the first half of 2021 was 220 million Euros, with a forecasted turnover in excess of 400 million by the end of the year.*

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