

VERSALIS COMMITMENT FOR EU PLASTICS STRATEGY PLEDGING CAMPAIGN

Introduction

Versalis S.p.A. (“Versalis”) is a chemical company, part of the Eni group, operating globally in the basic and intermediate chemical sectors, plastics, rubbers and chemistry from renewable sources. Versalis’ activities are carried on in different business areas: Intermediates and Oilfield chemicals, Polyethylene, Styrenics, Elastomers and Chemistry from renewables.

Versalis offers a product portfolio oriented towards satisfying a constantly evolving international market, focusing on R&D and licensing activities and further expanding its technological and business influence around the world. To achieve these goals, Versalis relies on its industrial expertise, its wide range of proprietary technologies, a wide-reaching distribution network and post-sales service activity (i.e. customer service).

Making use of its industrial and technological expertise, Versalis aims to achieve leadership in rapidly developing markets. In the Asia-Pacific area, Versalis has subsidiaries in Shanghai (Versalis Pacific Trading), Mumbai (Versalis Pacific India) and Singapore (Versalis Pacific Singapore). Versalis also has a joint venture with Lotte Chemical in South Korea (Lotte Versalis Elastomers) which is active in the elastomer business in the region.

Through its American subsidiary in Houston, Texas, Versalis is expanding its business on the U.S. and South America, in particular in the field of elastomers.

In Mexico, Ghana and Congo (as well as in the Middle East through our joint venture with Mazrui (VPM Oilfield Specialty Chemicals), Versalis is playing an active role in the Oil&Gas sector with its portfolio of products for the petroleum extraction and production industry.

As part of its strategy, Versalis is developing a business model embedding the Circular Economy according to three pillars strictly connected with innovation and taking into consideration the whole life cycle of products: eco-design, feedstock diversification including both renewable feedstock and secondary raw materials, and development of innovative mechanical, physical and chemical recycling technologies for polymers.

Versalis is committed to contribute to the objective of the pledging campaign through the development of specific initiatives in line with its strategy.

ECO-DESIGN

Eco-design of packaging for Versalis' products

Versalis has the aim to recover and recycle industrial polyethylene packaging - such as bags and liners - used for the shipping of products in bags on pallets and in bulk by truck/containers.

For this reason, Versalis started a project that involves the collection of used bags and liners and their recycling for the production of secondary raw materials, suitable for new packaging. This resulted in the creation of an efficient “bag to bag” and “liner to liner” circular design scheme, in collaboration with supply chain operators. Adopting such schemes enables to save resources, reduce plastics waste generation and improve the supply chain's sustainability.

PLEDGE: 50% of polyethylene packaging made up of 50% recycled material and further recyclable and / or reusable.

RECYCLING TECHNOLOGIES AND USE OF SECONDARY RAW MATERIAL

There are different ways to recycle plastics: mechanical, physical and chemical or molecular recycling. Mechanical recycling represents the most common technology to recycle plastics nowadays, already operating on an industrial scale and with economic and energy impacts lower than other recycling processes.

Mechanical recycling is undoubtedly very important but complementary implementation with physical and chemical recycling technologies is needed to really close the loop of plastic life-cycle and to reach the recycled volume target without compromising the quality and performance required by the main applications.

New range of polyolefin plastic products made from recycled packaging

Versalis has signed an agreement with a leading European company focused on post-consumer plastic recovery and recycling technologies, to develop a new range of polyethylene products made from recycled packaging.

Thanks to consolidated technological and commercial expertise in the polyethylene business, the two companies have developed new grades that can contain up to 75%

of post-consumer recycled plastic, designed to meet the needs of the packaging and agricultural sectors, two of the main market applications for this material. Versalis' portfolio of polyethylene which contains recycled content will soon expand to include new products that are currently undergoing development.

PLEDGE: *produce up to 100.000 tonnes of polyolefin based compounds containing up to 70% of post-consumer polyolefins, for applications that today mainly use virgin polyethylene.*

Please note: in the format attached, section Q1 for the uptake of recycled LDPE has been compiled with the overall amount of recycled PE for which Versalis is pledging (i.e. LDPE, LLDPE, HDPE etc). Consistent with the above, the percentage of recycled polymer is based on the total amount of virgin PE used (i.e., not only LDPE).

Production of Expandable Polystyrene from recycled plastic

Versalis uses secondary raw materials deriving from end-of-life products (mainly from polystyrene packaging) to produce expandable polystyrene (EPS), suitable to be transformed into expanded polystyrene panels for thermal insulation of buildings and protective packaging for appliances and furniture. This innovative product is obtained using Versalis' proprietary technology at an existing plant, making it possible to include currently up to 20% of recycled content. The characteristics of the resulting product are comparable to those of 100% virgin polystyrene.

PLEDGE: *Produce and commercialize up to 20.000 tonnes of styrene polymers containing up to 50% of recycled product, for the packaging and insulation sectors.*

Development of an innovative chemical recycling technology

Chemical recycling makes it possible to turn polymers back to their virgin materials. With the development of this technology, it will be possible to recycle plastic waste which is no longer mechanically separable (such as multilayer and mixed plastics waste) as well as plastics that have lost their initial quality due to multiple cycles of mechanical recycling. Chemical recycling will thus enable the transformation of plastic waste into new raw materials for the production of new plastics that are equivalent to the virgin materials. In this respect, the new raw materials would be suitable for all applications, including applications that have high quality and performance requirements, such as food contact packaging.

The development of innovative chemical recycling technologies capable of turning waste into new plastics identical to virgin plastics is the real “*game changer*” which will close the loop of the plastic life-cycle.

PLEDGE: *development of a chemical recycling technology that aims to strengthen and increase the recovery and recycling of post-consumer plastics in Southern Europe, allowing the production of polymers identical to those which are derived from fossil feedstock. The objective is to apply the technology on an industrial scale, the first step of which is technological development through a demo plant capable of treating 6000 t/y of mixed plastics.*

OTHER COMMITMENTS

Life Cycle Assessment

The Life Cycle Assessment (LCA) is adopted as a science based and holistic approach for evaluating environmental impacts of circular solutions to avoid that any given solution to “close the loop” does not simply shift the burden to another point along the plastics value chain.

In addition to technical and economic assessments, LCA studies integrate and support business development in implementing innovation to improve plastic sustainability along the whole plastic value chain.

On the road to sustainability Versalis has embraced the Life Cycle Perspective as an essential pillar.

Moreover, the verification step in the LCA process will be carried out by a third independent certification body, thereby increasing the reliability and credibility of the outcome of the LCA.

PLEDGE: *carry out, on each new initiative / major project in the field of sustainability / circular economy, specific LCA studies certified in order to demonstrate their actual sustainability.*

Personnel engagement

Consumer involvement is essential to reach a real circular model: there is no circular economy without good waste management, which starts with the contribution of all of us.

For this reason, as a company we are committed to involve our employees as an active part in the path towards the development of a circular and sustainable model.

In October 2019, a pilot project called “RiVending” was launched in Versalis’ headquarters in San Donato Milanese. The project has enlisted the involvement of

employees who use coffee vending machines by inviting everyone to place their used cups and stirrers (which are composed of polystyrene) in a special receptacle that makes it possible to separate the different materials, thereby simplifying the process of selection and recovery of this single type of plastic.

The material which is recovered and recycled in this way is subsequently used to produce new expandable polystyrene at Versalis' industrial plant in Mantua.

PLEDGE: *develop internal initiatives aimed at involving all personnel to encourage the recovery and recycling of plastic material used on a daily basis.*

Conditions

It remains understood that Versalis' individual pledges shall be considered strictly related to Versalis' targets as defined in accordance with its policies and corporate authorization processes and Versalis remains entitled to determine, at its own absolute discretion, timing and modalities for meeting the same.

Further, Versalis' individual pledges and participation in the Circular Plastics Alliance ("Alliance") shall be:

- without prejudice to the confidentiality of Versalis' know-how and sensitive information, as well as to any confidentiality obligation undertaken by Versalis;
- subject to the definition of a governance mechanism capable of guaranteeing to the Alliance members an appropriate representation and right of vote, along with the possibility not to adhere to initiatives which are not in line with each member's policies;
- based on the assumption that the regulatory and fiscal framework remains stable, along with favourable market conditions fostering investments in the circular economy with particular regard to the plastics sector;
- without prejudice to the commitment of Versalis to comply with applicable laws and regulations, including, but not limited to, anti-corruption laws and internal anti-corruption policies.