

ReVital Polymers, Pyrowave and INEOS Styrolution partner to launch closed-loop North American polystyrene recycling consortium

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Halifax, Nova Scotia, Canada and Frankfurt am Main, Germany

- Three industry leaders collaborate to close loop by recycling single-serve polystyrene packaging
- Advanced recycling technology will help to reduce amount of polystyrene packaging going to landfill
- Canadian solution to tackle the global problem of plastic pollution in waterways and oceans

Today at the *G7 Ministerial Meeting on Working Together on Climate Change, Oceans and Clean Energy*, three industry leaders involved with post-consumer packaging recovery – ReVital Polymers, Pyrowave and INEOS Styrolution – announced a strategic partnership to recycle polystyrene packaging collected in consumer curbside and depot recycling systems as well as other sources such as restaurants, offices, schools and universities.

The collaboration will use advanced recycling technology pioneered by Pyrowave that will close the loop by recycling single-serve polystyrene packaging and utilizing recycled polystyrene in the manufacturing of new products and packaging. This Canadian solution will not only reduce the amount of polystyrene packaging going to landfill, but will also address the global problem of plastic pollution in marine environments.

Polystyrene is mostly known for its use in foam and rigid packaging, containers, cups and utensils commonly used for food and beverage delivery in supermarkets and take-out food service. By enabling this ground-breaking recycling chain, ReVital, Pyrowave and INEOS Styrolution will change the way post-consumer polystyrene packaging is recycled in an integrated, restorative and regenerative manner that maintains the material's highest utility and value within a circular economy.

ReVital Polymers Inc., located in Sarnia, Ontario, is a member of the Circular Polymers Group, and a North American leader in processing post-consumer plastics. ReVital will install Pyrowave's Catalytic Microwave Depolymerization (CMD) technology as part of its plastics recycling process. Pyrowave's award-winning microwave machine will convert ReVital's sorted post-consumer polystyrene packaging to a liquid that contains plastic building blocks, called monomers, which will then be used by INEOS Styrolution.

INEOS Styrolution is a global leader in styrenics that manufactures and supplies polystyrene for various food service packaging applications and consumer goods products. INEOS Styrolution will process the material from ReVital and Pyrowave in a final step to return it to virgin resin that can be made into any new polystyrene application.

Pyrowave's technology, the connecting link between the ReVital and INEOS Styrolution, provides a process that makes polystyrene infinitely recyclable even with colour additives and food residue.



“This is a game changer for consumers and for municipal and industrial, commercial and institutional recycling programs,” said Keith Bechard, Chief Commercial Officer at ReVital Polymers Inc. “Polystyrene packaging, regardless of colour, food residue or odours, can be successfully added to recycling programs. When these materials are shipped to ReVital, they will be recycled into a high-value material that closes the loop. For ReVital, this project is an opportunity to increase our range of acceptable feedstock, increase the recovery rate for residential and commercial recycling programs and increase our value proposition to customers.”

The three companies are committed to reducing the amount of plastic waste that ends up in landfill or contaminates the world’s waterways and oceans.

“Although we know there is a lot of polystyrene waste around us, surprisingly the challenge we face is the lack of available material because it is not properly recovered,” said Jocelyn Doucet, CEO of Pyrowave. “Pyrowave’s technology expands the range of acceptable polystyrene feedstock, making it possible to build a new value chain that links ReVital’s processing expertise with INEOS Styrolution’s global end-market capacity.”

The Pyrowave process is an example of how innovation in diversion technology goes beyond resin-to-resin recycling technologies. Bechard noted: “These new technologies can improve recovery capabilities, drive our societies closer to zero waste and enhance circular economy objectives. We are very excited to bring our years of expertise in large-scale plastic recycling operations to support the commercialization of Pyrowave’s technology. We want to be the leader in adopting new circular technologies applied to recycling and our expertise in innovation makes it a perfect fit for our company.”

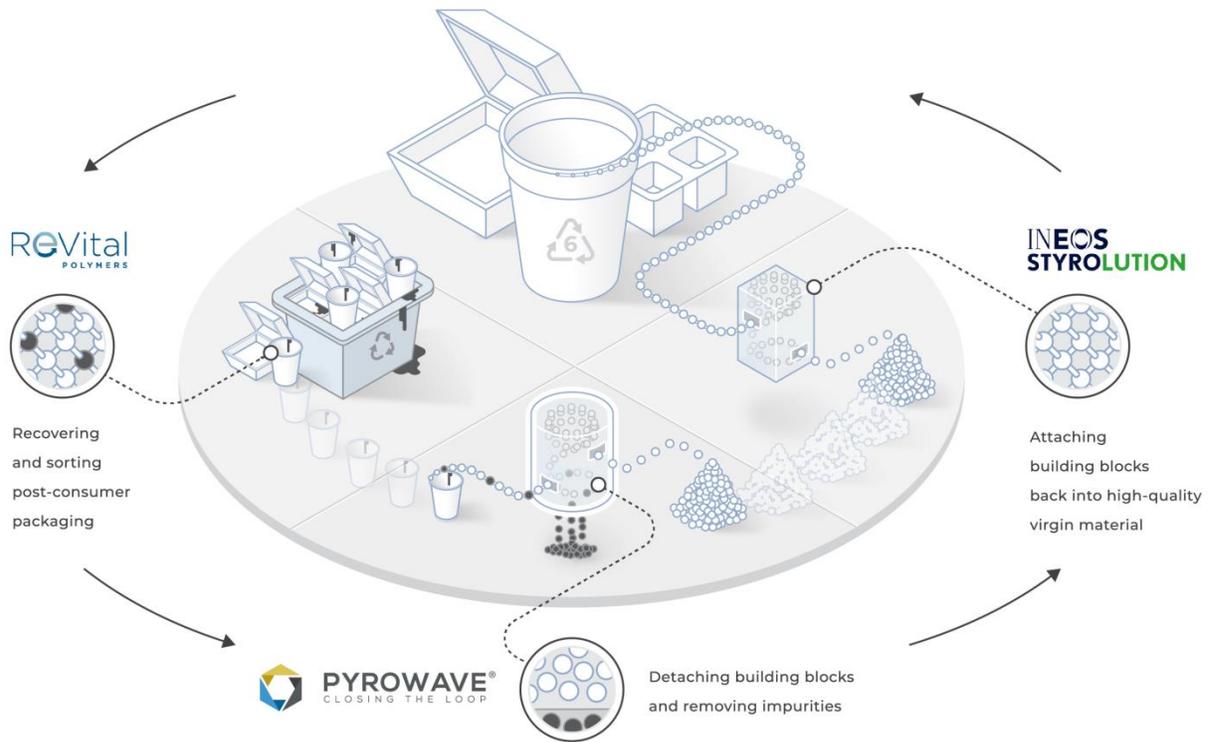
The industry would like to send the signal that post-consumer polystyrene can now be accepted through various collection programs. New technologies like Pyrowave are generating chemicals that are used by the manufacturers as feedstock to make new products and close the loop.

“INEOS Styrolution is extremely excited about this project, which brings together major players across the value chain with a smart solution to recycle polystyrene through new innovative technologies,” said Ricardo Cuetos, Vice President Americas, Standard Products, INEOS Styrolution America LLC. “Chemical recycling enables us to close the loop and prevents valuable waste from entering our lands, waterways and oceans.”

Polystyrene is versatile, inexpensive to produce, lightweight to transport and has a low carbon footprint compared to other packaging materials. The insulating properties of foam containers helps keep food at the desired temperature. But this material, like many other single-use packaging applications, suffers from poor recycling rates due to major limitations in recovering and utilizing soiled post-consumer containers.

The support from the public and private sector has been essential in developing Pyrowave’s technology and this project will continue to generate economical value and create and maintain jobs in the plastic recycling industry while strengthening the development of a more sustainable chemical industry. This project shows that innovative technologies developed in Canada can enable new circular business models, create new economical benefits and help solve a growing global environmental problem.

Closed-loop polystyrene packaging



About ReVital Polymers Inc.

As a clean technology company, ReVital Polymers Inc. is contributing to Ontario's transition to a circular and low carbon economy. Opened in 2017 and centrally located in Sarnia, Ontario, ReVital is the first facility in Canada, and one of the newest and most advanced recovery facilities in North America, that combines a Container Recovery Facility (CRF) and a Plastics Recovery Facility (PRF) in one location. It is a stable, dependable end-market for plastic packaging and products recovered in municipal and industrial, commercial and institutional (ICI) recycling programs in Ontario, across Canada and throughout the USA.

ReVital's proprietary process incorporates state-of-the-art technology that sorts and converts recovered plastics into discrete resin types, tailored to specific customer end-use applications. This approach ensures ReVital improves recovery rates for end-of-life products and packaging, extends material value and utility, and allows manufacturers and retailers to offer new products that incorporate recycled content. ReVital has capacity to meet the plastics recycling needs of municipalities in central Canada as well as the US mid-west, bringing recovered resources back to Canada to add value to Canada's recycling and manufacturing industries and local economy.



ReVital is a member of the Circular Polymers Group (CPG) along with Merlin Plastics Group located in British Columbia an Emterra Group, headquartered in Ontario. CPG is North America's largest plastics recycling consortium.

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About Pyrowave

Pyrowave is the leading original equipment manufacturer of plastic depolymerisation equipment using its patented Catalytic Microwave Depolymerization (CMD) technology. Pyrowave sells and leases small modular machine to recycling facilities that converts plastic waste into useful chemicals. Pyrowave offers turnkey service for treatment of the output including purification and brokerage. Pyrowave's turnkey service and equipment technology enhances the rate and the range of recyclable materials, reduces logistics costs and produce higher value end products from waste plastics – products such as recycled wax, oil and monomers. Pyrowave has a growing impact on the environment by promoting resource efficiency. Its technology will reduce waste landfilling, waste incineration and waste hauling via a net positive energy process.

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About INEOS Styrolution

INEOS Styrolution is the leading, global styrenics supplier with a focus on styrene monomer, polystyrene, ABS Standard and styrenic specialties. With world-class production facilities and more than 85 years of experience, INEOS Styrolution helps its customers succeed by offering the best possible solution, designed to give them a competitive edge in their markets. The company provides styrenic applications for many everyday products across a broad range of industries, including Automotive, Electronics, Household, Construction, Healthcare, Packaging and Toys/ Sports/ Leisure. In 2017, sales were at 5.3 billion euros. INEOS Styrolution employs approximately 3,300 people and operates 18 production sites in nine countries.

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