A successful collaboration: Centre de transfert technologique en écologie industrielle (CTTEI) and Regroupement Recyclage PolyStyrène (RRPS)

A Second Life for Polystyrene

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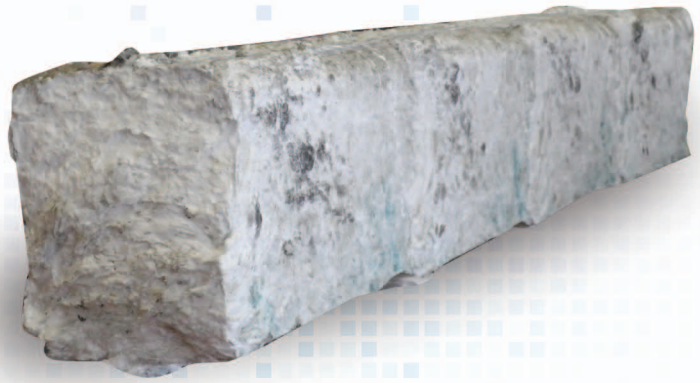
Though polystyrene is much beloved in the packaging industry, it also has a major drawback: little of this material is ever recycled. A consortium of Quebec companies has been working relentlessly to come up with some solutions to this problem, including a long-term project to which the Centre de transfert technologique en écologie industrielle (CTTEI) has actively contributed.

Polystyrene is found in food containers as well as electronics and furniture packaging. Lightweight yet rigid, and inexpensive to produce, expanded polystyrene (aka Styrofoam) is the ideal material for insulating and protecting goods. The post-consumer situation is an entirely different matter, however, and constitutes a major source of headaches for the packaging industry. As this material is made up of more than 90% air and takes up considerable room, the costs of handling and transporting it to recycling plants are very high.

As a result, way too little of this product gets recycled, frets Mario Grenier, Vice-President and General Manager of Dyne-A-Pak, a manufacturer of foam trays used for packaging meats and vegetables. However, this situation is bound to change very soon, he says. "All products will have to be recycled instead of being sent to landfill sites."

That is why, he adds, it is important to find solutions to these issues starting now. Mr. Grenier and several industry partners thus decided to tackle the problem. Their goal was to find an efficient way of collecting, densifying, recycling and remarketing polystyrene. They called on **CTTEI, a college centre for the transfer of technology**, to pilot two projects on site, perform physico-chemical tests on collected polystyrene, identify potential markets, and perform an economic analysis of various collection and recycling scenarios. "We needed an organization capable of overseeing the logistical component and having the resources and scientific knowledge required to track performance," explains Mario Grenier.



As mandates go, this was one that Claude Maheux-Picard, Eng., the Centre's technical director, was only too happy to take on. "It was a superb opportunity for us to work with so many major partners on finding viable solutions for recycling this material. The mandate was a hefty one, but it allowed us to show our strengths in applied research as well as our capacity to reconcile the needs of all the actors involved in the value chain."

As she also notes, this large-scale collaboration between various partners is far from over. Now working together under the banner of "Regroupement Recyclage PolyStyrène (RRPS)," they continue to pursue their research activities. Their ultimate goal is to secure the acceptance of polystyrene in selective waste collection (i.e., the blue bin) in Quebec. This group is also contemplating the possibility of setting up drop-off points that citizens may access. Moreover, a pilot project of this kind was launched last fall at the LaSalle (Montreal) ecocentre. This initiative will serve to generate a fuller set of data before other service points are made available elsewhere during the year. □

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