

How to Recycle more Plastics

Until now, plastic recycling has required waste to be carefully sorted before it could be processed. NOVPOL, an EU-funded project, proposes a new concept to provide a cost-effective recycling route for mixed polymers.



Photo: FOSTplus.be

Europe produces more than 21 million tonnes of post-consumer plastic waste every year and only 16.5% is recycled.

The main hurdle to plastic recycling is the different properties of the various plastics, which prevent different types of plastics from being treated together. An EU-funded project, NOVPOL, proposes a new concept that can recycle a mixture of different polymers, thus creating new polymeric materials with enhanced properties.

The goal of NOVPOL is to create a recycling system that can recycle a mixture of at least five different polymers. Moreover, the resulting plastics are expected to be polymers

with enhanced mechanical properties compared to those currently obtained by plastic recycling. Basic feasibility work has already been carried out, with the batch production of a new homogenized thermoplastic polymer from a mixture of incompatible plastics (e. g. a car interior). In order to provide a system suitable for future industrial application, the project aims to provide a homogeniser that operates continually with output of at least 500 kg/hour. Reduced maintenance is also an objective, along with a final product that can command a selling price of at least 80% of virgin polymers.

The NOVPOL project is multinational. An Italian firm, Filtri Clean Tecnica, provides the recycling technology and is associated with 7 organizations from 4 countries, including CRIF (Belgium) that analyses the produced polymer and PERA, an innovative English company, which is coordinating the project and also playing a role in product analysis. Other participants include stakeholders who either produce plastic waste or use polymers as a raw material.

The project is due to end in summer 2007 and will hopefully help enhance the economic efficiency of recycled plastics.

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sources: CRIF - website + phone interview <http://www.crif.be/>

NOVPOL project fact sheet on Cordis website

http://ica.cordis.lu/search/index.cfm?fuseaction=proj.simpdocument&PJ_RCN=7958518&CFID=3163070&CFTOKEN=50070125