ATTUALITÀ



by Ferruccio Trifirò

WITH WILFRIED HAENSEL

PlasticsEurope rappresenta i produttori di materie plastiche in Europa. All'associazione aderiscono oltre 60 società che rappresentano il 90% della produzione dei polimeri in Europa (Unione Europea e non). La filiera della

plastica in Europa - compresi i trasformatori e i produttori di macchine - occupa oltre 1,6 milioni di persone, con un fatturato globale annuo di circa 160 miliardi di euro. PlasticsEurope opera attraverso sei uffici decentrati: la sede di Bruxelles e cinque centri regionali situati in Francia, Germania, Italia, Spagna e Gran Bretagna. Riportiamo di seguito l'intervista al suo direttore esecutivo.

What kinds of industries are represented by PlasticsEurope?

lastics*Europe* represents the plastics manufacturers in Europe. We are a network of European and national plastics associations and have more than 100 member companies, producing over 90% of all polymers across the EU27 member states plus Norway, Switzerland, Croatia and Turkey. The European plastics industry makes a significant contribution to the welfare of Europe by enabling innovation, creating quality of life for citizens and facilitating resource efficiency and climate protection. More than 1.6 million people work in about 50,000 companies (mainly small and medium sized companies in the converting sector) to create a turnover in excess of € 280 billion per year. The plastics industry includes polymer producers (represented by Plastics*Europe*), converters (represented by EuPC) and machine manufacturers (represented by EUROMAP). For further info see the web links: www.plasticseurope.org; www.plasticsconverters.eu; www.euromap.org

What are the main difficulties in the recycling of plastics: they are not pure, there is no market, no continuous waste stream, not possible to earn enough or others? Plastics need all waste management options, including mechanical and feedstock recycling and energy recovery, or in case of biodegradable plastics even composting. It's a matter of saving resources and minimizing the environmental impact. Several Life Cycle Assessments have shown that mechanical recycling has an optimum so it doesn't always make sense to recycle.

The best contribution to resource conservation is not to "waste end-of-life plastics" in landfills. Throughout Europe, recycling is increasing by roughly 10% a year, and landfill is reducing by 2% a year. So we are progressing, but we can do more.

The determining factor for mechanical recycling is the combination of plastics and application: when the application allows the use of a single plastic - for example a PET beverage bottle - then mechanical recycling makes sense. If the application is complex and needs several different plastics - for example the front light of a car then the best environmental solution is often energy recovery.

What is the maximum percentage of the reuse of plastics reachable in the next years?

Under re-use, we are talking about the second, third and more use of a plastics product - such as a beverage bottle, for example. When properly designed, a PET beverage bottle can be recycled many times.

All plastics can and should be recovered - plastics are a resource, and therefore too valuable to be thrown away. Life Cycle Assessment studies have shown that about 15-20% can be recycled into plastics again, while of the remaining part the energy can be recovered like with oil.

In 2005, the recovery (both recycling and energy recovery) of endof-life plastics continued to increase by about 10% per year, in tonnage terms, with recycling and energy recovery demonstrating similar growth rate. The recovery rate of post-user end of life plastics stood at 47% in EU25+N/CH in 2005 - up 4% on the previous year. But recovery is not about dealing with a "waste problem". This is an outdated perception. The plastics industry is part of the solution to improving resource efficiency. We are borrowing energy to provide plastics products on which society relies, before returning that energy through recovery. This is an important contribution to improving energy efficiency and reducing greenhouse gas emissions that we can be proud of. We should not be afraid to talk publicly about our role in relation to climate change. Plastics have a positive impact on resources, dramatically extending the life-span of the raw materials used in production. For example, plastics insulation delivers energy savings at 150 times the energy needed for its production.

Have you significant examples of transformations of plastic wastes in useful products?

There are many examples. When talking about mechanical recycling, we see PET bottles being into fibres for use in materials (used, for example, to make a sweater). Polyolefin films are turned into garbage bags, while PVC piping can be used again in same application. We also need to consider feedstock recycling. Packaging and automotive shredder residue are turned, via gasification to synthesis gas, into methanol. Automotive and electro shredder residue can be used as reducing agent in steel production, while the precious metals of a mobile phone can be recovered while the carbon of the plastics are used as reducing agent.

Recovering energy from end-of-life plastics also plays a valuable

Wilfried Haensel

Dal 1° gennaio 2007 Wilfried Haensel è il nuovo direttore esecutivo di Plastics*Europe.*

Haensel, di nazionalità tedesca, ha lasciato il Gruppo Basf dopo 22 anni di esperienza principalmente nel settore della plastica per

dirigere Plastics*Europe* con i suoi cinque uffici regionali in Europa dalla sede di Bruxelles. Haensel, di formazione economica, ha ricoperto diversi ruoli nelle diverse sedi mondia-

li del Gruppo, in particolare è stato responsabile commerciale dei materiali espansi e delle resine stireniche in Asia e, più recente-

mente, vice presidente della business unit stirenici in Europa. Interrogato sulle sfide future, Haensel ha detto: "Non vedo l'ora di utilizzare la mia esperienza per promuovere l'industria europea della plastica. Plastics*Europe* si è affermata come organizzazione pan-europea dinamica e ben rispettata. Mirare al livello

> successivo è una sfida emozionante, un'occasione meravigliosa per contribuire a far percepire la plastica come 'il materiale del ventunesimo secolo', un materia-

le che fornisce le soluzioni ad alcune delle sfide più impellenti affrontate dalla società".



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role. Waste from households can be used for district heating and electricity generation, as plastics in household waste provide 30-50% of the calorific heat. Waste from households can also be separated jointly with paper and wood and converted in a SRF (Solid Recovered Fuel), which can be used as a substitute for coal in power plants and in the utilities of many integrated production sites.

What will be the influence of REACH directive on plastic industries? REACH is about the registration of chemical substances. Until now polymers are exempted, because their monomers will be registered. However, plastics are a formulation of polymer(s) and several additives. The formulation or preparation needs to be registered. This means that the polymer producers need the product safety information of the monomer(s) and the additives and information on the specific application. This together allows them to make a proper chemical safety review and to estimate the real risks for employers, consumers and the environment. Based on the safety review, use instructions will need to be provided.

What does REACH mean for the plastics industry?

In short, REACH will require time and money: time for experts to administer the legislation and money to test large amounts of substances. It is estimated that the average test costs are € 145,000. In total 20,000-30,000 substances need to go through this process. It will also trigger rationalisation of the use of certain substances: some products will disappear simply because the registration costs cannot be recovered. The positive is that this may lead to reduction of production costs, however it also may lead to disappearance of very innovative new substances and applications.

Although REACH is law, the 900 pages plus about 20,000 pages of technical guidance documents leave unfortunately room for many questions, for example:

- Which substances will disappear from the market? For sure those for which a safer alternative exists (mandatory substitution), even if the risks are easily manageable.
- How will the intellectual assets be protected (i.e. the information needs to be shared in the value chain)?
- How to deal with imports from low costs regions?
- How will REACH influence recycling? Hopefully the REACH implementation projects will be able to find proper solutions in order not to damage recycling.

Bio-based plastics may have a future?

Yes bio-plastics do have a future when the technical and economical requirements for a specific application are met. Polylactic acid (PLA), for example, can be used as a drinking cup for soft drinks,



but it cannot be used for warm drinks like coffee, because the cup would collapse.

The term 'Bio-plastics' is often confused by the public, and taken to mean two different things: plastics made from renewable resources and plastics that are biodegradable.

Fossil fuel based plastics can sometimes be bio-degradable, and biodegradable does not mean that you can simply throw away the product after use. PLA, for example, will only degrade under industrial conditions, it will not degrade in home composting.

There is a need of new laws or special social and political framework?

Today, the Waste Framework Directive is under revision, which is very important for the plastics industry: In order to optimise the use of resources and minimise landfill, the plastics industry advocates a policy of waste management that makes use of all options. Plastics can be recovered through a range of recovery operations - reuse, recycling and energy recovery techniques.

The Waste Framework Directive introduces a hierarchy of waste treatment options in order of preference. A number of studies show that strict application of the waste hierarchy as defined in the Waste Framework Directive may lead to negative environmental consequences. Each waste management process should be evaluated, both for its own environmental and economic benefits and for the environmental and economic dis-benefits it avoids.

It is clear that landfilling waste has the greatest environmental cost, and innovative waste management solutions are required to divert waste from landfill. Plastics*Europe* therefore advocates a flexible approach to the waste hierarchy, to ensure that the most sustainable, eco-efficient waste management option can be used in every situation.