## plastics & environment

temperatures are a must in order to succeed. Low glass-transition temperatures as well as a homogeneous material with excellent distribution of functional additives are the keys to meeting these requirements.

To obtain the film properties required for deep freeze packaging, a 3-layer system made from two Bio-Flex resin grades can be used. This film has a very appealing gloss surface together with great strength and chemical resistance along with demonstrating good barrier properties. Both resins are based on a blend of PLA and other biodegradable materials. Bio-Flex F 2110 is a translucent film with very good impact resistance at low temperatures and is especially useful in coextrusion. Its mechanical characteristics are very similar to HDPE.

Bio-Flex A 4100 CL is the first transparent PLA-based blend which can be converted into an excellent blown film. Additionally, the content of material from renewable resources in this grade is outstandingly high. It is a rather rigid grade and its mechanical characteristics are comparable to those of PP.

## Dependence on China

uring a meeting that was held in Istanbul on May 31-June 2, the Plastics Committee of BIR (Bureau of International Recycling) was warned by Surendra Borad (Gemini Corporation, Belgium). Europe's plastics scrap recyclers had become "over-reliant" on exports to China and should make efforts to address this "serious" issue.

The EU exported 3.3 million tons of plastics scrap in 2009, of which 90% went to China and Hong Kong. During the first three months of 2010 China imported 1.8 million tons. Borad urged the plastics recycling sector in Europe to develop other markets by de-blocking the restrictions on imports into other regions such as India and the Middle East

strictions on imports into other regions such as India and the Middle East.

With the exception of PET, imports of plastics scrap into India can be undertaken by only around 30 companies. The reason for the restriction is the mindset of the Indian officers and ministries. India considers scrap as waste whereas China considers scrap as raw materials. At present, India offers good demand for PET scrap and a consistent requirement for clean LDPE.

Jacques Musa (Veolia Propreté France Recycling) reported that no significant price fluctuations were anticipated for scrap exports to China in June. Meanwhile, the French market was beset by a shortage of available secondary raw material, with volumes of post-consumer PET bottles proving to be insufficient to meet demand. Stable prices for shipments to China were anticipated also for Germany, the Netherlands and Belgium.

Semih Tugay (Seta Group, Turkey) gave a guest presentation on the scope for recycled PET compounds to replace engineering polymers. PET availability and good molecular weight made it excellent for the production of toughened compounds that could, in many cases, compete directly with toughened and glass-filled polyamides at a considerable cost advantage.

Ed Kosior (Nextek, UK) highlighted some of the value-adding technologies available for both segregated and mixed plastics streams. Company projects in Europe include creating diesel from mixed plastics and converting post-consumer milk bottles into brand new milk containers. Adopting the recycling route to make food-grade PET and HDPE is not rocket science any more. Kosior also provided a long list of polymers found in WEEE (waste electrical & electronic equipment) - all of which can be easily separated into saleable fractions.

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