

Axion Recycling Newsletter

WELCOME to the latest edition of the Axion Newsletter. This issue includes an article that questions what is happening to the UK's WEEE and news that Axion Polymers' has calculated improved CO₂ savings made by recycling plastic compared with manufacturing virgin polymers.

IS WEEE GOING TO WASTE ?

Discrepancies in recently published collection data reveal that vast quantities of UK WEEE could literally be going to 'waste' rather than being collected as a useful resource for reprocessing, claims Axion Recycling.

Revised figures issued by the Environment Agency for the collection of waste electrical and electronic equipment has prompted Axion to air concerns that tens of thousands of tonnes of WEEE could either be mixed into the normal waste stream going to landfill, or sent overseas, rather than being responsibly recycled.

Given the current climate of heightened environmental awareness, coupled with record oil and raw material prices, it is vital that greater attention must be paid to the efficient recovery of a valuable and sought-after material, argues Keith Freegard, Technical Director of Axion Recycling.

"The situation is confused. I'm concerned that the figures suggest much of this waste, particularly hard-to-recycle co-mingled plastic from small household WEEE, is being sent overseas where I doubt it can be reprocessed to our equivalent standards, particularly for the separate removal of brominated flame retardants" he says.

His comments come after reported volumes from Producers show that around 800,000 tonnes of new E & E household goods were put on the market in the six months from July to December 2007. This vast tonnage of new E & E products would tend to confirm estimates of at least one million tonnes per year arising as 'waste' at end-of-life, even if only half of the new purchases is related to the disposal of an equivalent WEEE item.

"However, the last quarterly collection figures show only 83,500 tonnes collected from the household sector. This equates to about 330,000 tonnes a year - only a third of original annual estimates. So where is the rest of this waste going?" asks Keith.

The increase in WEEE collected from smaller items of equipment is also 'disappointing'. Keith says: "Given that some of the biggest contributors to collected WEEE tonnages, such as CRT displays and fridges were already being recycled under previous legislation,

the marginal increase is disappointing. Only about 15% of the 83,000 tonnes comes from WEEE categories other than LHA, refrigerators or displays."

Axion's market knowledge suggests that much of the plastic derived from the treatment of this collected material is either being exported or stockpiled. "Based on our experience of WEEE dismantling across all the categories, there should be around 15,000 tonnes of shredded plastic material being passed from primary treatment plants to approved reprocessors from the reported 83,000 tonnes collected in the October to December period.

"We know how much has been through our Salford factory in that period and there are currently not many other UK-based WEEE plastics reprocessors. So the majority of this volume must be going overseas – perhaps as much as 10,000 tonnes – or being stockpiled at AATF primary treatment sites," he continues.

"If this is so, and given that the technology exists in the UK to process the plastics from mixed household WEEE, then this represents a tremendous waste of resources. Questions remain over whether the WEEE Directive will actually deliver what it was originally designed to do. That is good quality, high volume recycling with removal of the undesirable hazards to protect the environment and recovery of high grade materials to be re-used in the manufacture of new products."

Axion's purpose-built facility at Salford is one of the most advanced processing plants in Europe and produces high-grade polymers from mixed small WEEE, fridge and monitor plastic. Recent £500,000 investment in more sophisticated separation techniques is improving the yield of high-grade plastic material from mixed small WEEE. The new plant has also helped to boost much-needed re-processing capacity for the material within the UK, thus helping to reduce its export abroad.



RECYCLED PLASTICS EVEN 'GREENER', CLAIMS AXION

Axion's new calculations show its recycled material has about 6% of the global warming impact of virgin polystyrene – significantly better than previously thought.

This finding further strengthens the argument for greater use of recycle in new plastic items and offers manufacturers exciting opportunities to develop products that appeal to 'eco-conscious' consumers. Axion used updated information from...

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RECYCLED PLASTICS EVEN 'GREENER', CLAIMS AXION (Continued....)

.... DEFRA on CO₂ emissions in the UK and better data from its own power consumption at full output to calculate the environmental impact of polymer production at its Salford WEEE (Waste Electrical and Electronic Equipment) recycling plant.

The £3 million advanced plant produces high-quality branded polymers from waste fridge, television and electrical appliance plastics. Axion supplies its Axpoly-branded recycled polymers to UK and European-based companies for use in various sheet-extruded and injection-moulded new products.

“Based on these revised figures, our total CO₂ generation is about 202 kg of CO₂ per tonne produced. This compares to an estimate by Plastics Europe of 3,400 kg of CO₂ per tonne of virgin high-impact polystyrene (HIPS),” says Keith Freegard, Axion’s Technical Director.

“This is significantly better than we previously thought. Our earlier figures had shown a 90% saving on CO₂ producing one tonne of mechanically recycled material compared to that of virgin polymer, but now savings are around 94%,” continues Keith. “Based on our recent

power consumption figure, this new data indicates that the CO₂ impact of mechanical recycling is in fact less than we originally thought. For polystyrene, which is the most representative of polymers to compare with our recycled blend, we are showing that mechanical recycling is only about 6% of the CO₂ impact of virgin material.”

According to Keith, the figures underline the need to promote the massive environmental benefit of lower carbon impacts in the production and re-use of recycled material in new products, particularly for the retail market.

He adds: “Consumers are increasingly thinking ‘green’ and including the environmental impact of an item’s production in their buying decisions. Companies wishing to capitalise on this growing awareness should really be using recycled polymers and really push the fact that products, be they a desktop pen holder or a laptop computer, have a much stronger environmental benefit based on savings we have just calculated.”



Kitchen cabinet leg made from recycled plastic

STAFF FOCUS – ANDY & AJ HINDLE AND ANDY & LIAM BENNION

It could be said that Axion Polymers is ‘keeping it in the family’, employing not one but **two** father and son teams. Father and son Andy and AJ Hindle work together at Axion Polymers. Andy Hindle



AJ & Andy Hindle

is a Warehouse Operator and his duties entail unloading and loading stock, organising the stock into the correct batches and generally being responsible for both the yard and the warehouse. His son AJ is a Stacker Truck Driver and a Process Operator for the company, working on several separation processes. Andy and AJ are keen football supporters although for

different teams. Andy is a Manchester City fan whereas AJ prefers Manchester United.



Andy & Liam Bennion

Andy has plenty of experience in this role having spent 12 years as a Shift Supervisor for Polyone. Andy’s son Liam is employed at the site as a Process Operator. Liam operates a wide range of separation processes. Andy and Liam are also keen football fans, enjoy going to matches and support the same team – Manchester United.

Father and son Andy Bennion and Liam Bennion both work at the Salford factory. Andy is a Shift Supervisor with responsibility for managing the staff on his shift and ensuring the smooth running of the factory.

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