

# Closed-loop recycling – opening the door to cost savings



**Indesit Company has become the first company to successfully incorporate recycled plastic from the UK waste stream within a high-end electrical equipment item – delivering substantial material and environmental savings.**

The leading household appliance manufacturer has produced a back panel for two of its washing machine models using 100 per cent recycled content. The innovation has given rise to a reduction in the amount of raw material used and cost savings associated with the production of the part.

The trial was funded by WRAP and undertaken in conjunction with Axion Recycling, to investigate the potential to extract recycled plastic materials from Waste Electrical and Electronic Equipment (WEEE), and use it during the manufacture of new products.

## How is it made?

Indesit Company has worked with its sub-contract plastic moulding company (RGE) to produce an access panel that will fit onto the back of a washing machine. The access panel is made by using recovered fridge waste, which is then shredded and made into a high grade polymer pellet. The access panel plate has been manufactured using 100 per cent recycled plastic with similar characteristics to the previous part that was made from virgin material.

Production trials were carried out at Indesit Company's Kinmel Park site after adapting the moulding tool design. Once the product reached the company's required level of design, quality and production, manufacture of the part could begin.

The pilot project was considered such a success that the plate is now being integrated into the back of the premium Hotpoint Aquarius and Ultima Washing Machines.

Indesit Company has also adapted the production process to allow them to easily alternate between using virgin and recycled materials, providing extra flexibility.

Robert Shaw, Design Manager at Indesit Company, said:

"Having successfully completed the trial, we now plan to roll out the innovation to some models of our Hotpoint Aquarius and Ultima washing machines range.

"We are now considering how further savings can be made by using recycled content within other components and parts, throughout our manufacturing operation."

## Why should I use recycled content?

Indesit Company expects that replacing virgin plastic with recycled plastic will result in a significant CO<sub>2</sub> saving for every tonne of recycled plastic used.



- Reducing a reliance on a finite resource (oil) for virgin plastic production.
- Reducing the volume of plastic waste going into landfill.

Indesit Company has achieved the same production cost for the recycled plates – by achieving the same cycle time in the moulding process. This, combined with a 5 per cent saving on raw material costs, delivers a saving to Indesit Company over the 500,000 parts produced each year.

There will continue to be a steady supply of used fridges arising in the UK, ensuring the security and consistency of plastic supply can be sustained in the long term. It is also important to recycle these materials within the UK wherever possible.

#### What will customers think?

New WRAP research has demonstrated that most consumers would accept the use of recycled materials in electronics products.

During a series of focus groups, participants talked about high-end products containing recycled content including a Sony Bravia television, the Electrolux Ultrasilencer Green vacuum cleaner and a Nokia 'Remade' concept mobile phone, and the response was largely positive.

Consumers will always consider primary aspects such as price, function, style, reliability and brand. However, the WRAP results show that some consumers would favour an electronic item containing recycled content at the point of purchase – if two items had similar price, function and quality.

#### Public Opinion

"If I had two choices, and one was environmentally friendly, I'd go for that – I just feel I should." (F, group 2)

"If it was over 50 per cent recycled... people would probably pay more attention to that." (M, group 6)

"55 per cent of the vacuum cleaner's body is made from recycled plastic material, and 90 per cent... can be recycled. That impresses me." (F, group 5)

"My instant reaction is, I love that it's recycled." (M, group 5)

"Even if I went into a shop and decided not to buy that product [containing recycled content] I would really respect the company for putting the information out there... so I can make a more informed decision on which product I buy." (F, group 1)

*Comments above taken from focus group feedback obtained by Ipsos Mori in June 2008*

#### Want to know more?

WRAP is keen to work with additional companies to further explore the benefits of using recycled content within other electrical product categories.

To find out how you could realise valuable business benefits by working with WRAP on a similar project, visit [www.wrap.org.uk/manufacturing](http://www.wrap.org.uk/manufacturing).

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