



CHEMICAL POLLUTION

Many bright ideas on how to improve recycling of plastics in electronics

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An overarching problem with the recycling of electronics is legacy chemicals. The content of some new products, in combination with imported and old products containing legacy chemicals, makes it difficult to create material streams that do not contain problematic substances.

The chemicals added to protect us are among the culprits

Brominated flame retardants are one type of substance that is often found in electronics, making it difficult to give recycled plastics new life.

In addition, many brands that produce electronics have high standards for which chemical substances they accept, preventing them from using – or at least makes it difficult to use – recycled plastics in new products.

In mid-January, we at ChemSec arranged our third workshop on recycled material and chemicals. This time, the topic was plastics in electronics. Several well-known brands and recycling companies participated in a vivid afternoon conversation about challenges, solutions and a way forward.

Here are five ideas that were highlighted during the workshop, on how to make recycling of plastics in electronics work better:

1. Cooperation between companies improves the waste streams

By working together, it will be easier for brands and recyclers to close the loop and find profitable solutions. This also gives all involved parties a holistic perspective, which will be increasingly important as we move towards a circular economy.

2. Transparency and traceability are key

Recycling companies handle electronics that contain legacy chemicals – often without knowing exactly what these are. This lack of knowledge poses a challenge for recyclers.

There is a need for increased transparency and traceability from the industry, in order for recycling companies to know what the recycled material contains. This will be increasingly important, as more hazardous substances become regulated in the future.

3. Much to gain if products can be easily picked apart

For the recycling process to be as smooth and efficient as possible, it would be a good idea to make electronics so that they are easy to disassemble.

Currently, the products are often being shredded in order to separate the different materials from each other, but this process is suboptimal, as it leads to high losses of material. If this step could be avoided, much could be gained.

4. Standardization of materials is needed

As with most other products that are difficult to recycle, plastics in electronics suffer from a plethora of material types.

In order to reduce the abundance, it is a good idea to limit the number of different plastics and additives used in electronics. This could be done through legislation or by the industry creating common standards.

5. Feedback from recyclers would be beneficial

It would help both policy makers and the industry to have more information on how the transition into a circular economy is progressing. Sharing is caring. What would happen if recycling companies measured the amount of hazardous chemicals in the waste they are processing over time?

These numbers would be interesting by themselves, but could also facilitate the transition into a circular economy. They would, for example, provide the means for better policy initiatives that aims to increase circularity free from hazardous chemicals.

Take-aways from other recent workshops

ChemSec recently hosted two other workshops on circular economy, also featuring participants from well-known brands and recyclers. Read more:

[Plastic packaging in focus when brands and recyclers gathered to discuss circular economy](#)

[5 entanglements for the textile industry on the trail towards circular economy](#)