

Meeting the challenge

of Proper Management of Hazardous Waste



Why a decontamination step is mandatory to ensure the success of a circular economy

Who is EURITS?

- The European Union for the Responsible Incineration & Treatment of Special waste
- An association of hazardous waste management companies across the EU
- Eurits members have a total capacity of high temperature incineration of around 3Mt/y; this represents 90-95% of the total capacity in Europe

Main activities

- Make sure hazardous waste is handled, managed and treated very specifically and in a correct manner:
 - To avoid any dispersion of hazards or contaminants into the environment
 - To ensure that the environment and public health are protected
 - To ensure that recovered materials are reliable

Key role

- The EU's leading voice on hazardous waste
- Over 25 years of experience in hazardous waste treatment
- Consistent promotion of best sustainable environmental practice
- Representing the special waste treatment industry in the EU Parliament and Commission, in order to create adequate support and policy frameworks in Europe.

Why a decontamination step is mandatory to ensure the success of a circular economy – Q&A

Why does the recycling of hazardous waste require a decontamination step?

A hazardous waste can be broken down in to three fractions:

- A fraction where a recovery of energy is possible
- A fraction consisting of a material that can be recycled
- A fraction containing the hazardous contaminants that cannot/shall not be recycled

Before or during the recycling process, hazardous wastes have to be decontaminated from their hazardous unwanted fractions to protect the public, workers and the environment from exposure. This is because the industrial sectors and the public must trust that a product incorporating recycled materials/substances from waste is as harmless as a product that does not contain recycled materials/substances.

Clear examples of decontamination in action

Examples	
<ul style="list-style-type: none">• Fluorescent lamp recycling	Fluorescent lamps contain valuable rare earth metals and mercury. The rare earth metals and other recyclable materials (e.g. glass, ferrous / non-ferrous metals etc.) must be safely removed without any release of mercury either to the workers or to the environment. Specialised plants exist specifically to treat these lamps, to recover materials safely whilst decontaminating the waste.
<ul style="list-style-type: none">• Regenerating spent solvents	Some waste solvents can be distilled to produce clean components like Ethanol, Toluene etc. Specialized plants can regenerate / re-distill these spent solvents before reuse. The concentrate from the distillation is incinerated with energy recovery, enabling a safe disposal of the contaminants from spent solvents.
<ul style="list-style-type: none">• Recycling lithium ion batteries	Batteries contain both valuable metals and heavy metals and acids. Lithium ion batteries can be treated in a rotary kiln to destroy the organic components and to deliver the lithium-containing bottom ashes to specialized facilities for recycling.

What should happen to the residual fraction from the decontamination step?

As for other hazardous waste, this contaminated fraction has to be disposed of in dedicated facilities for the safe treatment of hazardous waste. Hazardous waste incineration plants are usually the best choice to dispose of this contaminated fraction because they encompass:

- An efficient treatment process avoiding un-allowed emissions to the environment
- Strict management procedures for safe disposal
- Skilled and trained workers for safe disposal of the fraction
- Specific obligations from hazardous waste regulations and strong supervision from the authorities

What happens when the decontamination step is not done properly?

When the decontamination is not performed prior to the recycling activity, hazardous contaminants are simply dispersed either in the environment or in the recycled products altering its properties and increasing its toxicity.

In conclusion

There can be no sustainable circular economy without a decontamination step. By providing a powerful solution for the sound and safe disposal of contaminated fractions, dedicated hazardous waste incineration plays a key role in a sustainable circular economy.

Contact info

For more information on any of the points in this paper please contact the Eurits Secretariat:

T +44 20 72 22 12 65 | admin@eurits.org | www.eurits.org