EURITS
special waste in good hands

Meeting the challenge
of Proper Management of Hazardous Waste

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

EURITS, what's in a name?
Hazardous waste contains hazardous components & contaminants

Who is Eurits?
- The European Union for the Responsible Incineration & Treatment of Special waste
- An association of hazardous waste management companies across the EU
- Together, those companies are responsible for over 90% of the hazardous waste incineration in the EU

Main activities
Make sure hazardous waste is handled, managed & treated very specifically:
- Avoid any dispersion of hazards or contaminants into the environment
- Ensure that public health is protected
- Dedicated routes for safe treatment are needed

Key role
- The EU's leading voice on hazardous waste
- +20 years experience in raising awareness of the need for the proper management of hazardous waste
- Consistent promotion of best sustainable environmental practice

What is the objective of a circular economy?
- The objective of a circular economy is ultimately to preserve resources (water, fossil fuels and raw materials). Different ways exist to achieve such a goal: ecodesign of products, energy efficiency programs, renewable energy programs etc and recycling from non-hazardous and hazardous waste.
- Recycling of waste from its hazardous contaminants is not a new practice and is increasingly necessary to remove legacy contaminants. It has been done for many years (eg solvent recycling, batteries) but special care is needed.

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

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.

What does decontamination consist of?

"Decontamination" means any operation removing or treating the unwanted hazardous components or pollutants from a waste and if this is not possible from a technical or economic perspective, treating the waste in a way that the pollutants should be destroyed or irreversibly transformed.

Clear examples of decontamination in action

Examples	
• **Fluorescent lamp recycling**	Fluorescent lamps contain valuable rare earth metals and mercury. The rare earth metals and other recyclable materials (eg 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 and to decontaminate the waste in order to capture the mercury while allowing the safe recycling of the other components.
• **Removal of unwanted components**	Specialized plants can regeneration / re-distillation some spent solvents before reuse. Some waste solvents can be distilled to produce clean components like Ethanol, Toluene etc. The concentrate from the distillation is incinerated with energy recovery enabling a safe and sound disposal of the contaminants from spent solvents.
• **Destroying the organic components**	Batteries contain 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 for recycling.

What should happen to the residual fraction from the decon-tamination 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

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