



**LIFECERAM**

**Lifeceram-Zero Waste**

## **Newsletter no. 1**

### **The ceramic industry approaches zero waste: only 9% of the non-hazardous wastes generated in the manufacturing process goes to landfills.**

#### **Benchmarking study on ceramic waste generation in the ceramics manufacturing process.**

The ceramic industry is well on course to generate zero waste in its manufacturing process, witness the progress being made in the LIFECERAM-Zero waste project.

One of the recently completed, fundamental project tasks was the performance of a benchmarking study on the wastes generated in the ceramic process, as it was necessary to determine how much and which of these wastes could be used to generate a new raw material for the fabrication of a new product, the project objective. The results of a survey of ceramic tile manufacturing companies were processed, together with the data from a Voluntary Agreement (or "waste agreement") signed by the Spanish Ceramic Tile Manufacturers' Association (ASCER) and the public authority on environmental issues in the Valencia Region in 2002, aimed at fostering valorisation of the non-hazardous wastes generated in the ceramic production process.

The data compiled from the different sources include all types of waste, both hazardous and non-hazardous, either from the production process itself or from other ancillary activities, such as maintenance. This required segregating the information and identifying the types of waste that could be used in producing a new ceramic product. The *target wastes* are essentially non-hazardous ceramic process wastes that are currently not being valorised in the ceramic sector.

### A high percentage of waste valorisation in the ceramic sector.

Analysis of this information enabled the LIFECERAM research team to verify that a large amount of ceramic production process wastes was at present already being valorised: **only 9% of the non-hazardous process wastes generated by ceramic tile manufacture goes to landfills.**

It would therefore appear possible, a priori, to achieve zero waste generation in the ceramic sector by developing new urban flooring that could absorb presently non-valorised wastes.

The information compiled allows the quantity of currently non-valorised wastes to be estimated in absolute terms.

Based on the most recent ceramic sector production figures, corresponding to 420.2 million square metres in 2013, and the specific waste generation figure (2.128 kg/m<sup>2</sup>) obtained from the responses to the company survey questionnaire, it is estimated that **annually 894,186 tons of arising wastes are not valorised**, which could consequently be used in fabricating the targeted ceramic product.

The types of valorisable wastes and their classification codes according to the European Waste List (EWL) are as follows:

- 08 02 02 Aqueous sludges containing ceramic materials
- 08 02 03 Aqueous suspensions containing ceramic materials
- 10 12 01 Waste preparation mixture before thermal processing
- 10 12 03 Particulates and dust
- 10 12 08 Waste ceramics, bricks, tiles and construction products (after thermal processing)
- 10 12 13 Sludge from on-site effluent treatment

### About LIFECERAM-ZERO WASTE

LIFECERAM-Zero Waste is a LIFE+ project, coordinated by the Instituto de Tecnología Cerámica (ITC), with the participation of the Spanish Ceramic Tile Manufacturers' Association (ASCER) and the companies CHUMILLAS TARONGI, S.A., KEROS, S.A., and VERNÍS, S.A., which manufacture ceramic machinery; ceramic tiles; and frits, glazes, and ceramic colours, respectively.

The project seeks to achieve zero waste throughout the ceramic tile manufacturing process.

For further information on LIFECERAM+, please check out: <http://www.lifeceram.eu>



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