

Challenges for stone wool insulation recycling \rightarrow Circular business model for ROCKWOOL stone wool insulation

Stone wool insulation is fully recyclable into new stone wool. ROCKWOOL has a circular business model based on recyclable, long-lasting products and offering a recycling service. The goal is to increase the number of countries where this service is offered from five today to 15 by 2022 and 30 by 2030. The feasibility of the business model heavily depends on local waste legislation and available recycling infrastructure. One of the challenges is that stone wool insulation is light; therefore the current EU weight-based targets and low landfill costs in many Member States offer no incentive for recycling. Countries such as Denmark, Germany and The Netherlands show that **mandatory recycling of technically and economically recyclable waste streams**, combined with high taxes or a landfill ban can be a very successful approach. Another challenge is the demolition and sorting process, where **pre-demolition audits, sorting requirements and an existing recycling infrastructure** are key factors for success.

More info: https://www.rockwoolgroup.com/our-thinking/sustainability-and-circularity/





LafargeHolcim

Construction & Demolition Waste at LafargeHolcim: closing the loops

In the context of an increasing urbanization combined with the need to improve resource efficiency, LafargeHolcim committed to support its stakeholders in their circular economy projects.

With Bouygues Construction, we took part in a French urban circular economy <u>pilot</u> in which **two heritage buildings benefited from a complete renovation**. Through our aggneo® offer, we proposed a full circular economy and innovative solution. It consisted in **taking back, sorting and recycling 4,000 tons of demolition waste through a sharing mechanism.** The quality of demolition waste is hard to predict therefore we completed the deposit with streams from other construction sites. We also produced recycled aggregates from the demolition waste, including 720 tons **to make new concrete for the renovation project**.



Another major achievement in the C&DW management area is the creation of the Retznei <u>Recycling</u> <u>Center</u> in Austria. Our cement plant sets the benchmark in recycling C&DW by processing 100,000 tons of CD&W a year. The plant offers a complete solution especially for clay bricks - a non-frost resistant material which is usually sent to landfilling – by recycling it into new cement through our co-processing solution. Today, **12% of the raw material used to produce cement in Retznei comes from recycled waste.**

These projects allowed an optimal use of waste and contribute to reduce GHG emissions.



Tarkett is committed to a safe and circular economy.

Tarkett is a worldwide leader of innovative flooring and sports surface solutions. Group serves customers in more than 100 countries. With net sales of more than €2.8 billion in 2017, approximately 13,000 employees and 34 industrial sites, Tarkett sells 1.3 million square meters of flooring every day, for hospitals, schools, housing, hotels, offices, stores and sports fields.

Committed to "Doing Good. Together", Tarkett group is implementing an eco-innovation strategy based on Cradle to Cradle® principles and is promoting circular economy, with the ultimate goal of contributing to people's health and wellbeing, while preserving the natural capital. In the 90's, Tarkett started to develop <u>ReStart</u> collection and recycling schemes for post installations and post use vinyl and carpet flooring waste in Europe and North America.

Meanwhile, Tarkett has made significant progress in understanding the materials' effect on people's health and the environment, defining a positive list of materials to use in products formulation. Today, 96% of materials used in Tarkett floor coverings, have been assessed according to Cradle to Cradle® criteria. Building trust and transparency based relationships with customer, Tarkett started to publish <u>Material Health Statements</u> (MHS), verified by a third-party, the Environmental Protection Encouragement Agency (EPEA). MHS describe the materials used in products, disclosing the chemicals content and thorough assessment of health and environmental risks associated with their intended use in floor coverings as well as the recycled content and post-use treatment channels.

MHS is a fundamental step towards more transparent supply chains, ensuring a safe and circular economy in the building and construction sector.



More info: <u>www.tarkett.com</u>, <u>https://commercial.tarkett.com/en_US/node/material-health-statement-1283</u>



Developing circular economy across activities

Saint-Gobain is engaged in the development of the circular economy, which helps reduce the environmental impact of products and services over their entire life cycle. The concept meets our ambition to contribute to limiting climate change on the one hand, as well as consumption of non-renewable natural resources such as sand or natural gypsum on the other.

Minimizing production waste, developing offers for the recycling of construction and demolition waste and optimizing recycled content in its products without impacting their performance are our top priorities for



raw materials and waste management. The Group aims to reduce by 50% the amount of non-recovered production waste by 2025 vs. 2010

All activities support the Group's effort towards sustainable management of resources during the lifecycle of its products, using eco-innovation approach anchored in life-cycle analysis.

- For many years, **Gypsum** has been a pioneer in the recycling of construction waste. Collection and recycling services for gypsum board waste from construction and, sometimes, demolition are offered in 13 countries. In 2017, 250,000 tons of waste was recycled, the equivalent of two small factories.
- In April 2018, ISOVER France launched ISOVER Recycling, the world's leading recycling of glass wool
 waste. With a state-of-the-art industrial tool and the desire to increase the proportion of recycled
 raw materials in the composition of its insulation products, ISOVER has developed an unprecedented
 offer in partnership with recycling professionals.
- The **Flat Glass Activity** has optimized its logistics to promote the recovery of cullet across the entire value chain where the Group is present and especially between glass processing sites, e.g. manufacturing windshields or windows, and glass furnaces. Other Group products can already tolerate the replacement of virgin raw materials with recycled materials from other consumption circuits: glass wool and cast iron pipe.

Saint-Gobain Building Distribution France has developed a structure to take back waste from the same types of construction materials, products and equipment, which are sold to professionals, thereby becoming the first private network of collection points for waste from construction and civil engineering sites.

More info www.saint-gobain.com