

Press Release

New life for old mineral wool BitKOIN: Shoulder-to-shoulder research

Vienna, 15.10.2024 - In the BitKOIN research project, PORR is working together with Holcim, Rohrdorfer, Saint-Gobain, Montanuniversität Leoben and Graz University of Technology on recycling mineral wool waste to create an environmentally friendly substitute for granulated blast furnace slag. This will be used in cement production as a lower-carbon binder. The project is managed by the Chair of Waste Processing Technology and Waste Management at Montanuniversität Leoben.

Mineral wool is one of the most popular and frequently used insulation materials in building construction. But its low density and special material properties make it difficult to compress. This means that it fills up landfills quickly and destabilises them. From 1 January 2027, the disposal of artificial mineral fibres (AMF) including mineral wool waste will be prohibited at landfills in Austria.

Important step for the circular economy

“Together with industry partners, PORR has launched the research project ‘BitKOIN’. The aim is to turn mineral wool - which is a hazardous waste - into a non-hazardous, lower-carbon additive for cement production. This is an important step towards circularity in the construction business”, says PORR CEO Karl-Heinz Strauss. Led by the Chair of Waste Processing Technology and Waste Management at Montanuniversität Leoben, combined expertise and resources are being used to develop a substitute for granulated blast furnace slag (GBS), known as ‘GBS 2.0’, from mineral wool. The decarbonisation of the iron and steel industry also means that the blast furnace route will be phased out and so GBS will no longer be produced to the same extent in the future.

To produce synthetic GBS, mineral wool waste is combined with other residual materials before undergoing thermal treatment. The use of this thermochemically processed mineral wool waste helps to reduce overall emissions from the binder industry.

Optimal recipe

At present, preliminary tests are being carried out at the Chair of Thermal Processing Technology at Montanuniversität Leoben to develop the optimal recipe. One facet of PORR’s role in BitKOIN is to collect data on waste, as there is not much concrete information currently available on the amount of waste being generated. With the specially developed processing plant for AMF at PORR’s Recycling Center Himberg (RCH), PORR is also playing a key role in the processing and shredding of mineral wool waste. Processed sample material is provided for the tests in the course of the research project.

“With the BitKOIN project, we are taking an important step towards sustainable waste recycling. Together with Montanuniversität Leoben and our expert partners from industry, we are developing new approaches to utilising mineral wool waste, thereby actively contributing to a future of lower CO₂”, says Karl-Heinz Strauss, CEO of PORR.

Facts and Figures: BitKOIN

Project management: Montanuniversität Leoben (Chair of Waste Processing Technology and Waste Management)

Project partners:

- Holcim CTEC GmbH
- Montanuniversität Leoben (Chair of Thermal Processing Technology)
- PORR Umwelttechnik GmbH
- Rohrdorfer Umwelttechnik GmbH
- Saint-Gobain Austria GmbH
- Graz University of Technology (Institute of Technology and Testing of Building Materials)

Duration: March 2023 to February 2026 (36 months)

Photo:



The AMF unit at Recycling Center Himberg is effective in treating mineral wool © PORR

The press release including high-resolution images is available for download from the [PORR Newsroom](#).

About the PORR Group

Top performance driven by innovation - that's what PORR has embodied for 155 years. With around 21,000 employees and production output of around EUR 6.6 bn (business year 2023), PORR is one of the largest construction companies in Austria and among the top players in Europe. As a full-service provider, PORR offers every aspect of building construction, civil engineering and infrastructure construction across the entire value chain. The focus is on the home markets of Austria, Germany, Switzerland, Poland, the Czech Republic, Slovakia and Romania. PORR also works in selected international project markets such as Norway, the UK and Qatar. The PORR share is listed in the prime market segment of the Vienna Stock Exchange.



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