



[linkedin.com/in/ott-uai/](https://www.linkedin.com/in/ott-uai/)



portafolio@uai.cl



Av. Diag. Las Torres 2640, 7941169
Santiago, Peñalolén, Región Metropolitana



TRL

GREEN CEMENT

Description

The production of cement is vital for the economic development of any country, as it is a fundamental pillar of the construction industry. However, it is also one of the most polluting processes in the world, as evidenced by the fact that for every ton of cement produced, 1 ton of CO₂ is released into the environment.

On the other hand, the copper mining industry generates 2.2 tons of slag per ton produced. To put this into perspective, if a plant processes 1000 tons of copper slag, only 6% is transformed into copper, while the rest is disposed of in tailings, contaminating and affecting the lifespan of the mining plant.

Our solution uses this copper slag to produce cement, thus reducing the consumption of clinker by 15%, while maintaining early-age compressive strength, increasing the durability of the mortars used, and all this while reducing the amount of CO₂ emitted into the environment. Additionally, it allows for the reuse of a waste product from the copper mining industry.

Applications

- Cement Industry
- Direct application to the mortar

Advantages

- Maintaining early-age compressive strength
- Increase in the durability of mortars
- Decrease the amount of CO₂ emitted into the environment
- Reuses copper slag

Intellectual Property Status

- Not granted

Research Team

- [Paula Rojas Saperas](#)
- [Pure UAI](#)