

## Alkaline Activation Of Waste-Based Formulations

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Geopolymerization appears as a viable way to process and add value to alumino-silicate industrial wastes, originating products with high mechanical strength, high chemical inertia and enabling to encapsulate other waste materials, including dangerous ones.

Several industrial wastes such as sludges (generated in potable water filtration/cleaning operations and the cutting/polishing process of natural granite), foundry sands and rejects of clay-based lightweight aggregates fabrication were characterized, in order to use or adapt them for the production of geopolymers through the alkaline activation process.

Processing conditions were optimized and geopolymers were then fully characterized (composition, microstructure and relevant properties).

**Keywords:** Geopolymer; alkaline activation; wastes; recycling.