Geopolymers
Lab trials and setting control with lime

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Geopolymers

GBFS + Fly Ash = Alkaline Activator
Our Lab results
Preparations with lime

Fixed FA/GBFS 5:2

<table>
<thead>
<tr>
<th>Samples with Lime</th>
<th>Comp. Strength (MPa)</th>
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<tbody>
<tr>
<td>UGC</td>
<td>17.49</td>
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<tr>
<td>Sin cal</td>
<td>30.25</td>
</tr>
<tr>
<td>5% cal</td>
<td>35.71</td>
</tr>
<tr>
<td>10% cal</td>
<td>34.09</td>
</tr>
<tr>
<td>15% cal</td>
<td>35.21</td>
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</tbody>
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FA+GBFS + alkali cured ambient temperature

- Days in curing: 1D, 3D, 7D
- Resistance (psi): 2.7, 8.2, 20.1
Conclusions:

1. Geopolimers can be used to substitute some type of applications of cement.
2. Lime can be used to control setting behaviour of this material, in order to provide enough workability.
3. Geopolimers are subject to influences of curing temperature.
4. Further research is needed and is underway.
5. Specific applications can be done for the “efficient wood ovens”.
"There's a way to do it better—find it."
— Thomas Edison

Gracias!!, Thank you!! Merci!!!