

## Compressive Strength and Microstructure of Hybrid Alkaline Cements

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**Abstract :** Publications on the field of alkali-activated binders, state that this new material is likely to have high potential to become an alternative to Portland cement. Classical alkali-activated cements could be made more eco-efficient if the use of sodium silicate is avoided. Besides, most alkali-activated cements suffer from severe efflorescence originated by the fact that alkaline and/or soluble silicates that are added during processing cannot be totally consumed. This paper presents experimental results on hybrid alkaline cements. Compressive strength results and efflorescence's observations show that the new mixes already analyzed are promising. SEM results show that no traditional porous ITZ was detected in these binders.

**Keywords :** hybrid alkaline cements, compressive strength, efflorescence, SEM, ITZ

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