The Pozzolanic Reaction

1. In curing concrete, the same hydration reaction that generates Calcium Silica Hydrate (CSH)—aggregate-binding glue—also spaws junk Calcium Hydroxide (CH) which not only does nothing to contribute to concrete strength and density, but actively works against it.

2. Replacing some of the Portland cement with natural pumice pozzolan ignites a pozzolanic reaction within the hydrated concrete paste that consumes trouble-making CH and converts it into additional CSH.

3. The additional CSH does what you'd expect: makes the concrete or cementitious grout stronger, denser, and more enduring.