



Quarry & Concrete Products

Outgassing in Flowing Concretes and Screeds – Use of Aluminium Faced Insulation

Aluminium reacts with the alkalis found in Portland cement.

When these two chemicals are combined the reaction produces hydrogen gas. This is why when the reaction occurs within wet concrete bubbles come to the surface of the slab if aluminium faced insulation is in direct contact with the wet concrete. Please see the effect below in the form of before and after pictures.

Before, layed and finished



After, outgassed as a result of pouring concrete directly onto aluminium faced insulation



Although this problem is merely cosmetic, surface repairable and will have no effect on compressive strength or thermal properties it is better avoided.

For this reason Grange recommend that where aluminium faced insulation is used, a separating membrane, e.g. polythene, should be used to form a barrier between the insulation and the concrete when pouring.