

INTERIM ADVICE NOTE 127/09 rev1
THE USE OF FOAMED CONCRETE

SUMMARY

This Interim Advice Note provides guidance on use of foamed concrete.

INSTRUCTIONS FOR USE

This IAN takes immediate effect.

Use of foamed concrete

Background

The Health and Safety Executive (HSE) have identified several incidents involving the use of foamed concrete, including a serious accident on 21st August 2009 at a sewage pumping station being decommissioned, when contractors were injured as a result of a gas explosion. In this incident, a dry well had been filled with a large volume of foamed concrete over the previous three days and a spark from an angle grinder being used to alter metal sections is believed to have ignited an explosive gas mix that had accumulated in the vicinity of the foamed concrete. The foamed concrete mixture contained Incinerator Bottom Ash (IBA). Aluminum metal particles present in the IBA react with the water and cement to generate hydrogen.

Foamed concrete is sometimes used on Highways Agency contracts as trench reinstatement and for filling voids such as those associated with redundant structures and for other road construction applications.

This IAN supersedes IAN 127/09 issued October 2009 with immediate effect.

Action

Further advice is now available from the HSE, which enables foamed concrete with IBA to be used subject to the following precautions.

Where foamed concrete mixes contain IBA or other recycled materials, the mix should be placed in the open air. If this foamed concrete is placed within a building or confined area, adequate ventilation must be provided to ensure a build up of explosive gases cannot occur.

All exposed surfaces of the poured concrete must remain visible until it has set.

In addition sources of ignition such as naked flames or spark-generating tools (e.g disc cutters, angle grinders) should be kept away from the concreted area during the pouring and setting process for the foamed concrete.

Those using foamed concrete should also ensure full compliance with the supplier's requirements and safety data sheets for any additions to the concrete.

Implementation

This IAN should be disseminated across all of the HA Supply Chain. It should be used with immediate effect on all HA schemes and contracts

Contact details

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These regulations were notified in draft to the European Commission in accordance with Directive 98/34/EC, as amended by Directive 98/48/EC.