

the use of Aircrete IN CONCRETE BEAM & BLOCK FLOORING

Beam & Aircrete block suspended floor systems offer improved thermal insulation, reliability and performance, whilst their lightweight construction and simple, system-build installation also means faster build times.

The result is not only a superior form of construction, but significant cost savings in many situations. It is now more popular than timber or solid concrete floors in new housing at ground level, and is increasingly the preferred solution for upper floors too.

SUPERIOR THERMAL PERFORMANCE

With a suspended beam and Aircrete block floor, ground floor heat loss is reduced by up to 25% compared to other forms of construction, offering excellent cost savings through the reduction of secondary insulation. Further thermal improvements can be achieved using Aircrete blocks in the foundations (see Factsheet No. 1 'The use of Aircrete below ground').

IMPROVED NOISE INSULATION

Because of its higher mass compared to conventional timber or particle board floors, Aircrete gives improved potential for sound insulation between ground and upper floor rooms. It also permits the use of blockwork dividing walls between upper floor rooms, achieving better noise reduction than with stud walls.

EASY TO WORK WITH

Though very strong, Aircrete's light, cellular structure means it can be cut or chased using everyday hand tools - allowing quick and efficient installation of services.

FREEDOM OF DESIGN

A beam and Aircrete block construction affords a tremendous amount of flexibility in the layout of blockwork partitions at upper floor levels. Aircrete suspended floors can also be finished with any type of flooring materials, including many screeds or timber particle board. If used in garages, a reinforced screed is normally applied.

HIGHLY DURABLE

Aircrete is unaffected by moisture, cannot rot and is frost resistant, making its long term durability reassuringly predictable.

FIRE RESISTANCE

Aircrete floor blocks are non combustible and conform to Class '0' rating for the surface spread of flame.

INCREASED PRODUCTIVITY

Being lightweight and easily handled, Aircrete blocks are simple and quick to install. Unlike wet processes, floor blocks enable fast coverage of the floor area, which in turn establishes a finished working platform for follow-on trades. Large format floor blocks are also available which may reduce the number of beams required.

PROVEN STRENGTH

Aircrete has great transverse strength. Independent testing shows that Aircrete flooring blocks will easily support a design point load of 3.5kN, as required for domestic dwellings.

RELIABILITY

Using Aircrete for ground floor constructions will avoid the risk of failure often associated with other forms of construction, particularly in difficult ground conditions (i.e. clay heave or shrinkage) or as a result of poor compaction of fill beneath concrete slabs.



The blocks provide a strong and firm floor base.

FACTSHEET ²

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FARMHOUSE SELF-BUILD

This impressive self-build project – styled on the design of an adjacent Georgian farmhouse – was recently completed by the editor of Individual Homes, Homebuilding and Renovating, a national magazine for self-builders. So when the owner came to choosing the materials for this, his own project, the evaluation process was predictably robust!

For the floors and walls, he was particularly concerned about achieving a balance between good thermal performance, ease of building and of course cost-effectiveness.

He opted to use Aircrete blocks for both external and internal walls, and also installed Aircrete blocks in the beam and block flooring at both the ground and upper levels. This not only provided excellent thermal insulation and was easily installed but, significantly, allowed total freedom when positioning the partition walls on both floors. These solid internal walls also improved the sound insulation between rooms and gave the feel and practical benefits of a 'real' wall.

The enhanced insulation properties on the floors also maximised the efficiency of the underfloor heating system installed.

In practice Aircrete's claimed benefits and ease of build lived up to expectations and, indeed, the owner-builder was particularly pleased with the speed and simplicity of building with this lightweight material.



PROTECTON & HANDELING ON SITE

Blocks should be unloaded onto a dry level surface and covered to protect them from inclement weather.

INSTALLATION & ACCESSORY UNITS

A full range of accessory units is available from Aircrete members. Please refer to individual manufacturer's literature.

FOR MORE INFORMATION

This publication is only intended to be an outline guide to Aircrete products and you are advised to contact the Aircrete Bureau members for comprehensive technical support and guidance, backed by extensive technical literature covering every aspect of designing and working with Aircrete products.



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