



Hanson
HEIDELBERGCEMENT Group



Aggregate blocks
pocket guide

Introduction

Hanson is a manufacturer and supplier of aggregate blocks.

Using naturally occurring and recycled dense and lightweight aggregates, Hanson's aggregate blocks are a robust product, offering high compressive strength and excellent sound insulation to help meet the requirements of Building Regulations.

Hanson provides a unique wealth of knowledge, choice and resources, offering customers a wide range of products for the Housing, Commercial and DIY sectors, all backed by the sales support and technical service that is the strength of this division.



Standards and regulations

The British/European Standards and Building Regulations that apply to the manufacture and use of aggregate blocks are always subject to revision and improvement.

Certain documents that are either in the process of change, or whose publication is imminent, cannot be fully accommodated at the time of publication, although, wherever possible, reference has been made in the text.

The Hanson website at www.hanson.com/uk will be updated as important changes occur, but for any specific queries relating to the manufacture or application of the product, please contact the Product Services Department on: 0330 1231015.

Quality

Hanson's aggregate blocks are manufactured to the requirements of BS EN 771-3, ensuring compliance with all relevant standards and codes of practice.

The range of Hanson aggregate blocks is available in a variety of densities, strengths, sizes, configurations and finishes to suit most applications.

Services

A comprehensive range of literature is available with technical advice on all aspects of the application and use of aggregate block products in construction.

Hanson A global business

Hanson is one of the UK's largest suppliers of construction materials. Our products include aggregates, asphalt, ready-mixed concrete, bricks, blocks and cement. We are part of the HeidelbergCement Group, which employs 65,000 people across five continents and is the global leader in aggregates and has leading positions in cement, concrete and heavy building products.

Hanson Building Products – A sustainable business

Hanson Building Products is committed to being a sustainable business and contributing to sustainable development. We achieve this by continuous improvement of our manufacturing and extraction processes and by providing products which contribute to sustainable construction.

Made at factories certified to ISO 14001, our clay and concrete products have many features which assist our customers in constructing attractive, sustainable buildings which enrich the built environment and are ideal for zero carbon developments.

These include: thermal mass, thermal and sound insulation, longevity, durability, low maintenance, flexibility, flood resistance and the ability to be recycled. We can advise on how best to use our products in sustainable buildings and how they contribute to high ratings under the Code for Sustainable Homes and BREEAM.

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Paint Grade Blocks

Product Summary



Paint Grade Blocks

Hanson's Paint Grade blocks have been designed specifically for aesthetically important block work.

These superior quality products are manufactured with a consistent close face texture and are available in a range of shapes and sizes to suit a variety of applications. All products are produced to the requirements of BS EN 771-3.

Other strengths and sizes may be available on request.

Evalast Paint Grade

Evalast Paint Grade blocks can be used in all situations where durable, robust, painted, blockwork is required. They are an economic solution for applications such as:

- factory units
- workshops
- sports centres
- offices

The strength and type of aggregate used allows these blocks to be built in external applications with sustained long term durability.

The close texture of the Evalast Paint Grade products, coupled with their high strengths, provide an excellent base for a variety of standard fixing systems.

Evalast Paint Grade

Mean compressive strength:
7.3 - 10.4 N/mm²

Thermal conductivity:
1.22 W/m.K internal,
1.31 W/m.K external

Dry density:
1900 kg/m³



Background Blocks

Product Summary



Evalite Paint Grade

Evalite Paint Grade blocks are ideal for use where appearance and weight are of prime consideration. They are intended for internal applications where a lightweight, economic or paintable block is required for aesthetically important projects such as:

- shopping precincts
- offices
- sports centres
- factory units
- workshops

The close texture of Evalite Paint Grade products, coupled with their high strength, provide an excellent base for a variety of standard fixing systems.

- Whilst Paint Grade products have a consistency of texture, colour consistency cannot be guaranteed.



Background Blocks

The products contained within the Background Blocks range are available in a range of shapes, sizes and strengths.

They are not intended to be left fair-faced, but used with a secondary finish. All products are produced to the requirements of BS EN 771-3.

Other strengths and sizes may be available on request.

Note: Background blocks are not intended to be left fair faced or painted, and should have a finish (plaster, render, plasterboard, cladding etc.) applied where the wall is to have visual importance.

Evalite Paint Grade

Mean compressive strength:
7.3 N/mm²

Thermal conductivity:
0.47 W/m.K internal

Dry density:
1450 kg/m³

Evalast Background



Acoustics

The high density of Evalast Background blocks gives them excellent sound insulation properties. When laid to form a sound separating wall, they achieve the required mass as given in the Building Regulations and Robust Details.

Flooring

Evalast Background blocks are suitable as infill blocks for beam and block flooring systems. They should be specified as 'for flooring', in order that the correct manufacturing base is sourced.

Strength

Having high density, with associated strengths, Evalast Background blocks easily achieve the durability requirements for use above and below ground. They can be used in normal and sulphate soil conditions equivalent to classification DS-3.

Thermal

Evalast Background blocks, in conjunction with suitable thicknesses of insulation, are able to provide high levels of thermal insulation.

Fire

Concrete is an excellent fire resistant material. Evalast Background products are manufactured from either Class 1 (limestone) or Class 2 (gravel and crushed stone) aggregates. Where fire resistance is important it is essential that the class of aggregate is specified.

Easilift

Evalast Easilift blocks are available as easier to use versions of the 140mm Evalast Background block. This means they benefit from all of the usual Evalast properties whilst weighing less than 20kg thus meeting manual handling guidelines.

Coursing Bricks

To complement the range, 10.4 N/mm² coursing units (brick size) are available for use in conjunction with 7.3 N/mm² 100mm blocks and 140mm width products.



Evalast Background

Mean compressive strength:
7.3 - 30.0 N/mm²

Thermal conductivity:
1.32 W/m.K internal,
1.42 W/m.K external

Dry density:
1990 kg/m³

Fenlite Background and Fenlite 1500 Background



Acoustics

The density of Fenlite and Fenlite 1500 blocks gives them excellent sound insulation properties. When laid to form a cavity sound separating wall, they will achieve the required mass as given in the Building Regulations and Robust Details.

Flooring

Fenlite and Fenlite 1500 7.3 N/mm² blocks are suitable as in-fill blocks for beam and block flooring systems. They should be specified as 'for flooring', in order that the correct manufacturing base is sourced.

Strength

The strength of all Fenlite blocks dictates their application in exposed conditions. Block strengths of 7.3 N/mm² and greater should be specified if they are to be used on the outer leaf of cavity wall below dpc level and left unprotected. In all other normal situations 3.6 N/mm² blocks would be suitable.

Having good strengths, excellent fixing can be achieved using a variety of patent fixings.

Thermal

Fenlite and Fenlite 1500 blocks, in conjunction with suitable thicknesses of insulation, are able to reach high levels of thermal insulation.

Fire

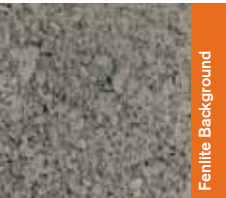
Concrete is an excellent fire resistant material. Fenlite and Fenlite 1500 blocks are manufactured using Class 1 aggregates which provides the highest level of fire resistance for a given size.

Sustainability

Fenlite contains up to 70% recycled raw materials.

Coursing Bricks

To complement the range, 10.4 N/mm² coursing units (brick size) are available for use in conjunction with 3.6 N/mm² 100mm blocks and 140mm width products.



Fenlite Background



Fenlite 1500 Background

Mean compressive strength:
3.6 - 10.4 N/mm²

Thermal conductivity:
0.45 - 0.48 W/m.K

Dry density:
Fenlite: 1350 kg/m³
Fenlite 1500:
1500 kg/m³



Durability

Strength and durability

Hanson's aggregate blocks are inherently durable and if used in accordance with the appropriate British/European Standards, will last the lifetime of the construction into which they are built.

They possess good frost resistance and in general, provided they are selected following the recommendations of PD 6697:2010, Clause 6.2.8 and Table 15, problems should not occur.

In the case of aggregate blocks to be used near or below ground level, the unit should meet one of the following criteria.

- a) Block density of at least 1500 kg/m³, or
- b) Made with dense aggregate to BS EN 12620, or
- c) Having a compressive strength of at least 7.3 N/mm²

All dense blocks, together with 7.3 N/mm² lightweight blocks, would be suitable for the above condition.

Sustainability

Sustainability

Aggregate blocks are sustainable products that have durability in excess of 150 years, low maintenance requirements, good heat and noise insulation and can be recycled after use.

All of our blocks include GGBS (Ground Granulated Blast furnace Slag), resulting in lower CO₂ emissions. They are also certified with the Responsible Sourcing of Materials standard, BES 6001, providing assurance that products conform to environmental impact specifications.

Our Fenlite product range also includes up to 70% recycled raw materials.

We are continually improving the sustainability credentials of our products through our environmental management and product development programmes.

To find out more about how Hanson embeds sustainability throughout its manufacturing processes in the UK, please visit www.hanson.com/sustainability and download our 2011 sustainability report.

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