

AUTOCLAVED AERATED CONCRETE

EG2 / 400 Precision Blocks

DESCRIPTION

EG2/400 Precision Blocks are masonry building blocks formulated from cement, lime, silica sand, gypsum and aluminium. The slurry is cast into moulds and is transported into green state curing, where a chemical reaction takes place for aeration, giving the Autoclaved Aerated Concrete its light weight characteristics. The "Cake" is then wire cut and steam cured under pressure in an autoclave, providing enhanced strength characteristics. Once the autoclaving process is complete the AAC blocks are ready for installation.

TYPICAL APPLICATION

EG2/400 Precision Blocks are predominantly used for non-load-bearing internal and external walls. Exterior surface require cement plaster for protection against the elements. Internal walls can be rendered using either cement plaster or gypsum plaster.

DIMENSIONS

Length	600mm (± 1.5mm)
Height	250mm (± 1.0mm)
Thickness	100, 150, 200mm (± 1.5mm)
Tolerance: ± 1.5mm (L) ± 1.5mm (t) ± 1.0mm (h)	

DENSITIES

Dry Density	400 kg/m ³
Delivered Density	530 kg/m ³
Tolerance ± 50kg/m ³	

STRUCTURAL PROPERTIES

Compressive Strength	min 2.5 N/mm ²
Shrinkage	0.1 - 0.2 mm/m

THERMAL PROPERTIES

Thermal Conductivity	0.11 W/mK (EN 1745)
Thermal Conductivity	0.11 W/mK (TS 825)

****NOTE**** 0.11 W/mK - EN 1745 & 0.11 W/mK - TS 825

THERMAL RESISTANCE (R-Value)	
100mm thick	0.91 m ² K/W
150mm thick	1.36 m ² K/W
200mm thick	1.81 m ² K/W

****NOTE**** calculations based on walls without render

THERMAL TRANSMITTANCE (U-VALUE)	
100mm thick	1.10 W/m ² K
150mm thick	0.73 W/m ² K
200mm thick	0.55 W/m ² K

****NOTE**** Thermal performance does not take into account the effects of services and and potential thermal bridge areas eg. concrete or brick walls, walls with soffits and movement joints. The Engineer or Architect must ensure that the correct materials are specified and used at these junction areas in order to maintain the thermal ratings.

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FIRE RATING

100mm thick

2 Hours

Classification of construction materials, excluding floor coverings, according to their reaction to fire (EN 13501-1)

A1	Class A1 products must not contribute to any phase of the fire, including to the fully developed fire. For this reason, they are automatically expected to meet all the requirements of the lower classes.
A2	Class A2 products must meet the same criteria as class B according to standard EN 13823. Furthermore, under fully developed fire conditions, these products should not make any major contribution to the fire load or to the growth of the fire.
B	Like class C, but meeting stricter requirements.
C	Like class D, but meeting stricter requirements. Also, under thermal attack from a single burning item, they must enable limited sideways spread of the flame.
D	Products which meet the criteria for class E and are capable of withstanding, for a longer period, the attack of a small flame without resulting in any substantial spread of the flame. They must also be capable of withstanding the thermal attack of a single burning item with sufficient delay and limited heat release.
E	Products capable of withstanding, for a short period, the attack of a small flame without resulting in any substantial spread of the flame.
F	Products for which no reaction to fire behaviour has been determined or which do not fall under any of the classes A1, A2, B, C, D and E

Annex 2 - Building Materials - Flammability Class A1 (Flammability Class A1 without the need to test and evaluate the materials)

Gas (porous) concrete units

Cement and / or fine material of water-based binders such as lime (siliceous agents) and units produced by the combination with the pore producing materials. It covers precast units.

AAC IS CLASSIFIED AS CLASS A1 - NON-COMBUSTIBLE

Fire resistance of non-bearing wall

100mm thick

EI 120

****NOTE**** Fire ratings are based on walls without services. Therefore fire ratings are equal to the remaining thickness of the wall after installation of services. At junction areas such as movement joints, control joints and at soffits, engineers and architects must ensure the correct materials are used at these junction areas in order to maintain the fire rating.

SOUND RESISTANCE VALUES

Block Size	Render Type	R (dB)
100mm	5mm Gypsum	36
150mm	5mm Gypsum	40
200mm	5mm Gypsum	44
100mm	10mm Plaster	38
150mm	10mm Plaster	41
200mm	10mm Plaster	45

****NOTE**** Acoustic ratings do not take into account the effect of services including junction areas such as with concrete or brick walls, soffits and movement joints. Engineers and architects must ensure the correct materials are used at these junction areas in order to maintain the acoustic ratings.

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WEIGHT PER BLOCK

100 mm thick	7.95 kg
150mm thick	11.93 kg
200mm thick	15.91 kg

BLOCKS PER M²

100, 150, 200 mm thick	6.67m ²
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BLOCKS PER M³

100 mm thick	66.67 / m ³
150mm thick	44.44 /m ³
200mm thick	33.33 / m ³

WEIGHT PER M²

100 mm thick	53.03 kg/m ²
150mm thick	79.58 kg/m ²
200mm thick	106.12 kg/m ²

CURING TIME

Autoclaved Aerated Concrete Blocks are steam cured at 190°C for 12 hours between 10-12 Bar pressure. Therefore AAC blocks are ready for use directly after autoclaving.

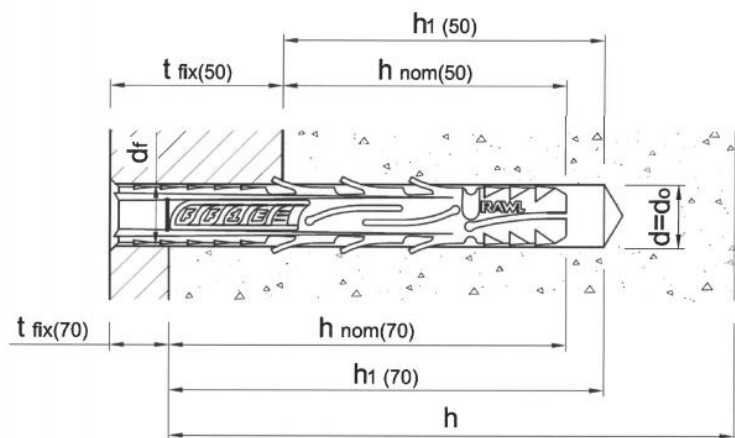
WALL FIXINGS

Course threaded wood screws minimum 50mm long can be used for fixings up to 25kg

HEAVY DUTY WALL FIXINGS

Rawlplug		
Product	kN (avg)	Anchor Spec
R-FF1-N-08	1.19	8 x 100mm
R-FF1-K10	1.41	10 x 100mm

****NOTE**** FF1 Anchor system: - The innovative design of the expansion zones enables fixture into AAC blocks with embedment of only 70mm. The FF1 has the flexibility that allows you to define the fixing elements thickness (tfix) value, by adjusting the overall length of your anchor. Example FF1 10x100 has a maximum tfix = 30mm and FF1 10x140 has a maximum tfix = 70mm



CONFORMITY

Blocks are manufactured in accordance with EN 771-4 standard. Aertec Thin Bed Mortar is manufactured in accordance with EN 998-2 standard.

Blocks can only be laid using Aertec supplied Thin Bed Mortar which has been specifically designed for the use with Aertec supplied AAC blocks. See mortar data sheet for more information.