



AAC FORTEM 450

DESCRIPTION

High quality FORTEM brand autoclaved aerated concrete, with apparent dry density 450 kg/m³, available in flat and tongue and groove versions with or without technological handles.

- non-combustible;
- thermal insulation;
- sound insulation;
- light weight;
- durable and sound.

FIELD OF USE

Due to the dimensional stability and durability of the blocks, FORTEM AAC is ideal for building exterior and interior, structural* and non-structural walls.

PRODUCT CODE	AAC DIMENSIONS [mm]			RECOMMENDED USE				
Product name	Thickness d	Height h	Length l	Coating (cladding)	Exterior	Interior	Non-load bearing	Load-bearing*
Fortem 50	50	250	600					
Fortem 75	75	250	600					
Fortem 100	100	250	600					
Fortem 125	125	250	600					
Fortem 150	150	250	600					
Fortem 200	200	250	600					
Fortem 250	250	250	600					
Fortem 300	300	250	600					✓
Fortem 350	350	250	600					✓

* Load-bearing masonry is calculated and executed only in the areas and under the special conditions imposed by the regulations.



COMPOSITION

Sand, lime, cement, gypsum, water, aluminium paste.

TECHNICAL INFORMATION

Product name	Thermal conductivity $\lambda_{10\text{ uscat}}$ [W/mK]	Diffusion coefficient μ	Average compressive strength [N/ mm ²]	Shear resistance [N/ mm ²]	Reaction to fire class
Fortem 50	0.11	5/10	3.3	0.3	A1
Fortem 75	0.11	5/10	3.3	0.3	A1
Fortem 100	0.11	5/10	3.3	0.3	A1
Fortem 125	0.11	5/10	3.3	0.3	A1
Fortem 150	0.11	5/10	3.3	0.3	A1
Fortem 200	0.11	5/10	3.3	0.3	A1
Fortem 250	0.11	5/10	3.3	0.3	A1
Fortem 300	0.11	5/10	3.3	0.3	A1
Fortem 350	0.11	5/10	3.3	0.3	A1

LAYING

1. Preparing the substrate

- The substrate (foundation, floor or load-bearing element) must be: dry, clean, without frozen portions; free of efflorescence, dust, grease or oils; flat and resistant, without major unevenness.

⚠ Attention! The installation of AAC blocks is not allowed in conditions of: rain, snow or frost, temperatures below +5°C.

- It is recommended to apply a horizontal waterproofing strip (e.g. bitumen cardboard or membrane) under the first row of masonry, to protect against capillary moisture.
- The position of the walls is marked using a marking string and checked with a spirit level.

2. Preparing the AAC blocks

- Before installation, the blocks will be dusted with a dry brush.
- Depending on the ambient temperature, they can be lightly moistened (by spraying with water) approx. 15 minutes before installation.
- To adapt to the required lengths, the AAC blocks are cut with a special AAC saw.

3. Installing the AAC blocks

- Start by installing the first row, which must be perfectly horizontal and vertical, placed on a layer of mortar that compensates for any unevenness.

- Application of adhesive mortar: Prepare according to the instructions in the technical sheet; apply with a notched trowel, in a layer of 1–3 mm; apply to both the horizontal and vertical joints (only to blocks without tongue and groove).
- Laying and adjustment: The blocks are placed in the mortar bed and aligned using the marking string; gently tap into position with a rubber mallet; check the flatness with a spirit level (on each row); remove excess adhesive immediately with a trowel.

4. Masonry weaving (wall bond)

- The blocks must be woven together in each row.
- Vertical joints must be offset by $\frac{1}{4}$ – $\frac{1}{2}$ of the block length from the row below.
- Flat blocks are fixed with adhesive on all contact surfaces.
- Blocks with tongue and groove are fixed only on the horizontal joint, vertical joints do not require mortar.

5. Protection after installation

- After installation, the AAC walls are protected against the weather – covered or protected from direct contact with rainwater until the finishes are applied.

PACKAGING AND STORAGE

Product name	No. of pieces / Pallet	m ³ /Pallet	m ² /Pallet	Pallet Weight [kg]
Fortem 50	240	1.80	36.0	1072
Fortem 75	160	1.80	24.0	1072
Fortem 100	120	1.80	18.0	1072
Fortem 125	96	1.80	14.4	1072
Fortem 150	80	1.80	12.0	1072
Fortem 200	56	1.68	9.6	1001.8
Fortem 250	48	1.80	7.2	1072
Fortem 300	40	1.80	6.0	1072
Fortem 350	32	1.68	4.8	1001.8

Storage shall be carried out on flat, solid and dry surfaces, preferably concrete platforms or areas with a compacted crushed stone layer.

Direct placement on the ground is not permitted.

A maximum of two pallets may be stacked, provided perfect stability is ensured.

AAC blocks shall be kept in their original packaging until use. After removing the protective film, the blocks must be covered with a waterproof but ventilated tarpaulin.

The blocks shall be stored in areas protected from moisture, mud, traffic and contact with other materials.

Storage of wet products or other materials on top of AAC blocks is strictly prohibited.

HEALTH AND SAFETY DURING PROCESSING

During cutting or sanding of the AAC, dust particles may be generated, which is why the use of personal protective equipment (PPE) is mandatory:

- respiratory protection mask (for dust);
- safety glasses;
- work gloves;
- appropriate clothing;
- safety boots with metal toe caps.

The blocks must be handled with care to avoid accidents caused by the weight of the elements. It is recommended to use appropriate tools and mechanized means where appropriate.