



AVAL KT 55

2 in 1: adhesive for EPS application and for mesh embedding

- high adhesiveness
- good water vapour permeability
- reinforced with microfibres
- resistant to cracks and scratches
- also for graphite - enhanced EPS



Up to five European Technical Approvals for ATLAS insulation systems



Use

2 in 1 – designed for fixing thermal insulation boards and for the reinforced layer (base coat) installation in the external thermal insulation of buildings.

Element of the thermal insulation systems – an element of composite thermal insulation systems, granted the European Technical Approval (ETA).

Enables fixing various expanded polystyrene boards – including graphite - enhanced and elasticized expanded polystyrene boards.

Types of substrates: concrete of all classes, aerated concrete, cement or lime-cement plasters, sandstone and rough walls of bricks, blocks, hollow blocks and other ceramic or silicate materials.

Properties

Flexible – compensates thermal and mechanical stress exerted on other layers of the system.

Increased resistance to cracking – it is reinforced with cellulose fibres.

High adhesion – strongly bonds to mineral substrates.

High water vapour permeability – does not restrict water vapour transmission through the insulated wall.

Technical data

AVAL KT 55 is manufactured as a dry mix of cement binder, aggregates and modifying agents of the highest quality, reinforced with cellulose fibres.

Bulk density (of dry mix)	ca. 1.40 kg/dm ³
Wet density (after mixing)	ca. 1.55 kg/dm ³
Dry density (after setting)	ca. 1.45 kg/dm ³
Mixing proportions (water/dry mix)	0.20 ÷ 0.22 l/1 kg 5.00 ÷ 5.50 l/25 kg
Min./max. bed thickness	2 mm / 5 mm
Adhesion to concrete	min. 0.25 MPa
Adhesion to expanded polystyrene	min. 0.08 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	ca. 5 minutes
Pot life	ca. 4 hours
Open time	min. 25 minutes

Technical requirements

AVAL KT 55 is an element of the AVAL external thermal insulation system which has been given:

- the European Technical Approval no. 06/0187,
- the National Standard Authority of Ireland (NSAI) Certificate no. 10/0347,
- the British Board of Agrément (BBA) Certificate no. 13/5018.



Application

Substrate preparation

The substrate should be frost-free, stable, flat and sound, i.e. sufficiently strong, cleaned of materials which might affect adhesion of mortar, especially dust, dirt, oil, grease, wax, residue of oil or emulsion paint. Before commencing repair work the substrate should be cleaned and — if excessively absorbent — primed with AVAL KT 17 (ATLAS UNI-GRUNT) emulsion. Priming is also necessary in the case of substrates such as weaker cement or lime-cement plaster or walls of aerated concrete or hollow cinder blocks. Larger rough spots and holes should be filled with ATLAS LEVELLING MORTAR or ATLAS PLASTERING MORTAR.

Panels preparation for base coat installation

Before the base coat application make sure the insulation boards are frost-free, flat, clean and dusted, if the panels were sanded after application. It is recommended to sand and dust the graphite-enhanced polystyrene boards before the base coat application.

Adhesive preparation

Pour the mortar from the bag into a container with suitable amount of water (for proportions see Technical Data section) and mix until homogenous with a drill with a mixer. Leave the mortar to rest for 5 minutes and then remix. The ready to use adhesive must be used up within ca. 4 hours.

Boards application

Apply AVAL KT 55 adhesive on the wall contacting side of the panel using the "strip-point" method. It consists in the application of continuous circumferential bead (at least 3 cm wide) at the edge of the board and 6÷8 patches of 8÷12 cm in diameter evenly distributed on the whole surface. In total, apply as much adhesive as sufficient to cover at least 40% of the surface of the board (after pressing down to the substrate, at least 60%) and to ensure appropriate binding of the board with the wall. Immediately after the application of the mortar on the board, fix the board to the substrate and strike it to place it in the required position, so that the mortar thickness under the board does not exceed 1 cm. In case of even and smooth substrates, the mortar can be evenly distributed with a notched trowel on the whole surface of the board to ensure 2÷5 mm of adhesive layer after fixing.

Base coat installation

The base coat can be installed once the adhesive mortar used for board application has sufficiently set and any necessary additional mechanical fixings have been installed (after three days on average). Apply adhesive mortar to the surface of the installed insulation boards, spread it using a notched trowel and embed fiberglass mesh in the adhesive layer. It is recommended to apply the mesh in vertical strips and float the adhesive smooth over the mesh so it is not visible and does not contact the EPS boards directly.

Finishing works

It is possible to start rendering when the weather conditions are as specified in Technical Data Sheets for thin-coat renders, but no earlier than 3 days after the application of the base coat.

Consumption

Individual consumption of the adhesive depends on the properties of the substrate (e.g. evenness) and the technique of boards/panels application. Boards application: from 4.0 to 5.0 kg/m².

Base coat application: from 3.0 to 3.5 kg/m².

Important additional information

- Do not apply warm graphite-enhanced polystyrene. Protect graphite-enhanced polystyrene from warming up during installation and initial adhesive binding, as it may result in adhesive loosening.
- The mortar can be used to its full advantage when applied in conjunction with other elements of the system and according to the specified technique.
- Scaffolding covers should be used during installation work. Installation work should not be carried out in snowy or rainy weather or during strong wind.
- In case of fixing foamed polystyrene boards on weak substrates whose bearing capacity is hard to determine (e.g. unstable, dusty, difficult to clean), it is recommended to make an adhesion test. It consists in fixing of 8÷10 cubes of expanded polystyrene 10x10 cm each, in various places of the façade and checking the bonding after 3 days. Substrate resistance can be deemed sufficient if the foamed polystyrene cube tears during the attempt of removing it. If the cube is removed with the mortar and substrate layer, it means that the substrate is not structurally sound enough. Further procedure for such case, e.g. the determination of the method of the weak layer removal should be described in the relevant technical design of the insulation.
- The tools must be cleaned with clean water directly after use. Difficult to remove residues of the set adhesive can be removed with the ATLAS SZOP agent.
- Irritant - contains cement. Irritating to respiratory system and skin. Risk of serious damage to eyes. May cause sensitisation by skin contact. Due to its form - powder, the product may cause mechanical irritation of eyes and respiratory system. Keep out of reach of children. Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. If swallowed, seek medical advice immediately and show the container or label. Follow the instructions in the Material Safety Data Sheet.
- The adhesive must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Paper bags: 25 kg

Pallet: 1050 kg in 25 kg bags

The above information constitutes basic guidelines for the application of the product and does not release the user from the obligation of carrying out works according to engineering principles and OHS regulations.

At the time of publication of this product data sheet all previous ones become void.

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