

PROCESSING GUIDELINES FOR SARKING PITCHED ROOF INSULATION

A potential damp and air screen

Depending on the activities which take place, steam is produced (i.e. produced by the human body, by plants, by building moisture, by activities in the kitchen or bathroom, and the like). This means that it is possible that the cold spots in the roof cause condensation on the inside. And so, normally, it is necessary to fit a moisture barrier on the warm side of the insulation (inside). However, the insulation boards and their tongue and groove joint already have enough steam diffusion resistance for buildings in climate classes I, II, and III (see chart), unless otherwise stated by the designer. It is important to state that a roof can only be made damp-proof if it is also airtight. In buildings with indoor climate classes I, II, and III, the IKO Enertherm ALU NF insulation board itself ensures that the structure is already damp-proof and airtight, provided that the seams and joints are sealed properly through the application of ALU TAPE and ULTRA TAPE. For more details, see our detailed sketches.

Indoor climate class	I	II	III	IV
Sort of building	Buildings which produce little or no moisture	Well-ventilated buildings which produce little moisture	Buildings which are used intensively	Buildings which produce a lot of moisture

Construction

Make sure that the rafters are wide enough, because the assembly has to be very precise and bigger nails and screws are used. See the summary chart below.

Article	Brand name	Dimensions	Insulation thickness inc. battens 30x50mm	
			90° fixation	60° fixation
30464160	IKOfix ASSY AW40	8x160mm	80mm	
30464180	IKOfix ASSY AW40	8x180mm	100mm	80mm
30464200	IKOfix ASSY AW40	8x200mm	120mm	100mm
30464220	IKOfix ASSY AW40	8x220mm	132mm	120mm
30464240	IKOfix ASSY AW40	8x240mm	160mm	132mm
30464260	IKOfix ASSY AW40	8x260mm		160mm

Application

Before you fit a Sarking roof, you must give due regard to the following points. Use the appropriate sketches to set an exact starting point in order to prevent unnecessary cutting.

The IKO Enertherm ALU NF insulation boards are always fitted in a horizontal direction onto the support structure and lie at the foot of the roof on a wooden support rafter (with the same thickness as the insulation board), which is fastened onto the rafters or trusses. The boards should be fitted from the bottom to the top with the groove facing downwards. The vertical joints between the boards can be located between two rafters, but they should be fitted staggered. It is advisable to fasten the first boards onto the rafters or trusses to keep them securely in place (resistance to wind, vibrations, etc.).

It is difficult, if not impossible, to fit insulation boards in strong winds. Although insulation boards should easily be capable of bearing a person's weight, they must never be regarded as a safely negotiable base. Obviously, you must make sure that the thermal insulation and the damp and air screens are never damaged at the seams and the various joints.

Undertile felt

A layer of IKO Enertherm Polyvent (Rubershield Breathable membrane) must be fitted to the insulation boards before the battens are fitted. Another possible solution is the application of IKO Enertherm ALU NF Pro, onto which a damp open under tiling is applied to the insulation boards in the factory so that you can save time. The undertiling at the eave must run through to the drainpipe or stick out over the wall at all events so that any water which infiltrates can be drained off effectively.

Battens and fastening material

Battens are wooden planks which are fastened to the rafters or trusses diagonally through the undertiling, the insulation, the moisture barrier (if applicable), and the bearing floor (if applicable). They ensure that that insulation boards are fastened to the rafters or trusses and serve as a base for fitting tile battens or boarding.

Since the battens are subjected to much greater forces with the Sarking technique than with a traditional roof construction, a minimum thickness is advisable, as outlined in the Technical Guidelines of an approved engineering consultancy.

IKOFIX ASSY AW 40 is used as a fastening material for the battens. This has been developed specially for fitting IKO Enertherm ALU NF. The length of the screw is determined as follows: thickness of the lath + thickness of the IKO Enertherm ALU NF + at least 50mm depth in the rafter. The diameter of the screws is at least 8mm.

The battens are fastened to the rafters or trusses in accordance with the following guidelines:

- The mountings must be at least 50 mm deep in the rafters or trusses.
- There always has to be a mounting 100 mm from each end of the lath, irrespective of its length.
- The battens are fastened to the wooden support rafter at the eave.
- It might be necessary to drill into the lath in advance.
- The maximum distance between the lath mountings depends on the roof slope (see the chart below).

Roof slope	Maximum distance between mountings for rafters which are 450 to 600 mm from each other (in mm)
Less than 35°	400 mm
Between 35 and 60°	330 mm
More than 60°	200 mm

Supports and roof covering materials

Roof covering materials, supports, and the various accessories and their respective fitting methods must comply with the regulations of the relevant Technical Guidelines and the manufacturer's guidelines.

Inside finish

The type and the characteristics of the inside finish are determined by the eventual purpose of the building and depend largely on aesthetic criteria and fire safety requirements. At all events, the finish has to comply with the prevailing fire safety requirements for the building.

Consult our website for detailed sketches: www.enertherm.eu.

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