

IKO Roofing Shingles



Selector & Fixing Guide



Durable, waterproof and beautiful

Protecting what's under your roof from the elements is simplicity itself with IKO Roofing Shingles. IKO Roofing Shingles make ideal roofing; they are attractive, easy to install and are perfect for use on a range of buildings. Durable and aesthetic, they can be used on new building projects or for refurbishing everything from stables, gazebos, beach huts, chalets, summerhouses and sports pavilions to garden buildings. They can also be used as vertical cladding.

IKO Roofing Shingles are suitable for use on any building, temporary or permanent, domestic or commercial, habitable or recreational with a roof pitch from 15° to vertical. The simplest of makeovers can be completed by following the fixing instructions. IKO Roofing Shingles provide a long lasting, highly decorative, weatherproof roof finish in a variety of pitched roof situations.



Technology at its best

IKO Roofing Shingles are supplied in packs of individual strips, available in two shapes - IKO Armourglass Plus Square Butt or IKO Armourshield Hexagonal:

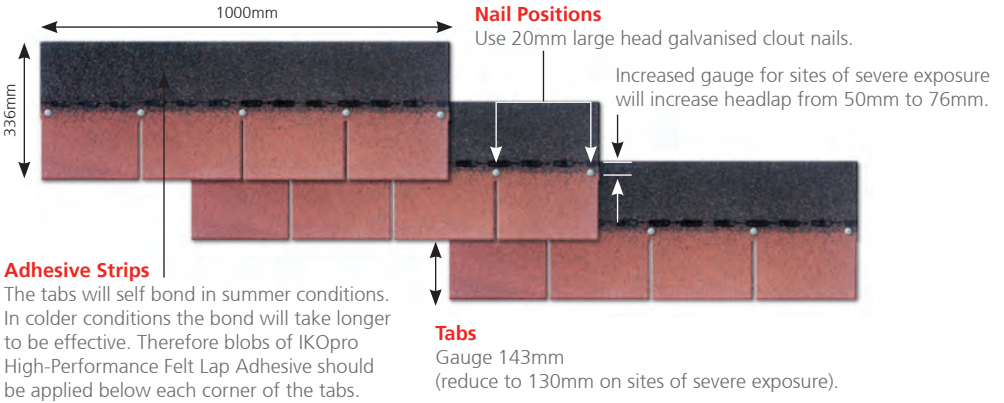
They consist of a glass fibre base, coated with oxidised bitumen and surfaced with attractive coloured mineral granules.

Benefits

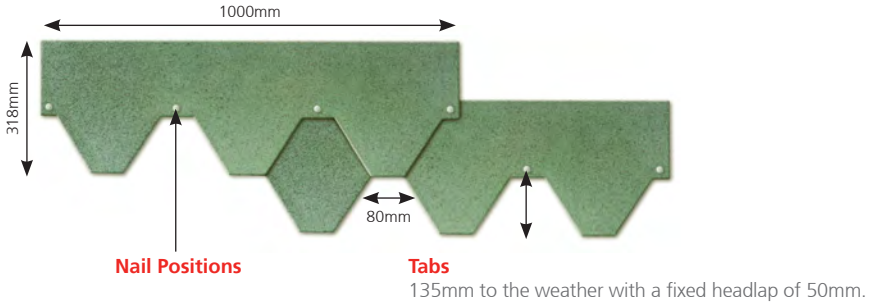
- Long lasting
- Economical
- Attractive appearance
- Choice of colours
- Choice of shapes
- Easy to install
- Lightweight
- Proven waterproofing performance
- Non-rotting glass fibre base
- UV resistant decorative mineral surfacing
- Complies with European Standard EN544. Class1

Product Range

IKO Armourglass Plus Square Butt Roofing Shingles



IKO Armourshield Hexagonal Roofing Shingles



IKO Roofing Shingles	Pack Contents			Strips		
	Roof area coverage (max)	Weight	Number of strips	Length	Width	Tabs
IKO Armourglass Plus Square Butt	2.0m ²	32.4kg	14	1m	336mm	4
IKO Armourshield Hexagonal	3.0m ²	28.5kg	22	1m	318mm	3

IKOpro High-Performance Felt Lap Adhesive	Cartridge size 310ml - Allow 1½ cartridges per pack of shingles to cover nail heads. Where sites are subject to severe exposure, allow an additional 2 cartridges per pack of square butt shingles for the blobs of adhesive at the corners tabs
IKOpro High-Performance Roofing Felt Adhesive	IKOpro High-Performance Roofing Felt Adhesive: 1, 2.5, 5 and 25 litre tins Fully bonding coverage (for bonding IKO Glass Fibre Underlay 20m (Type 3B) at valley shingles), allow 5 litres per 8m ²

	Roll Length	Roll Width	Roll Weight
IKO Glass Fibre Underlay (Type 3B)	20m	1m	36kg

Fixing Instructions

Helpful fixing guidelines

For standard conditions and roof slopes (15° to 85° pitch):

- Place one fixing nail 25mm from each end and one fixing nail directly above the centre line of each cut-out.
- All fixings should be on a line 25mm above the top of the cut-out. Proper fixing increases the strength and wind resistance of the shingle roof; so do not skimp on fixings. If a fixing will not enter the decking, use another in a nearby location.
- In very severe exposure areas and on steep roofs (60-85° pitch) use 8 nails per shingle, placing one fixing nail 25mm from each end and 2 nails per cut-out, spaced 25mm left and right above each cut-out.
- In severe weather, a small blob of IKOpro High-Performance Felt Lap Adhesive must be applied beneath the corners of each tab and over each nail head, for additional security before the heat of the sun activates the self-seal patches.
- Always leave a 2mm gap between the ends of individual shingles, to allow for minor adjustments in alignment.
- If shingles are to be used on a habitable building that is subject to the Building Regulations, then they should be installed in accordance with BS 5534: 2003 Code of Practice for slating and tiling (including shingles).

Understand Your Roof Pitch

- Knowing your roof pitch - the angle at which your roof slopes or pitches - enables you to best plan your project and determine the correct layers of underlay membrane to use.
- IKO Roofing Shingles are designed for application on pitched roofs 15° and over, both habitable and non habitable buildings.
- For non-habitable buildings of all roof pitches, a single layer of IKO Glass Fibre Underlay 20m (Type 3B) should be used as an underlay. This is laid parallel to the eaves with a 75mm side overlap and 100mm end laps. It is fixed using large headed clout nails at 300mm c/c along the lower edge and down all sloping sides.
- For habitable buildings with a roof laid to pitch of 15° to 20° two layers of IKO Glass Fibre Underlay 20m (Type 3B) must be used as preparation before fixing the shingles. The first is laid as above. The upper layer is laid staggered to the first and fully bonded with roofing felt adhesive.
- For habitable buildings with a roof laid to pitch of 21° and above a single layer of IKO Glass Fibre Underlay 20m (Type 3B) must be used as an underlay.
- If your building is subject to Building Regulations, then please contact IKO Technical Services for further guidance.

IKO Armourglass Plus Square Butt Roofing Shingles

Instructions for fitting shingles on garden sheds and similar buildings

Step 1

Prepare the roof decking on to which you are fixing the shingles

Check that the roof decking of your structure is sound, clean, dry and stable before starting.



Step 2

Fix the felt underlay

An underlay consisting of rot proof IKO Glass Fibre Underlay 20m (Type 3B) should always be fixed below the shingles.

Starting at the eaves and working up the slope of the roof, unroll the IKO Glass Fibre Underlay parallel to the eaves. The underlay should extend beyond the roof edges and turn down the external edges by 50mm. Tack into position at 300 c/c along the lower edge and down all sloping sides. End laps should be 100mm and the vertical overlap 100mm.





Step 3

Make and fix the shingles strips for sloping verges

First make the shingle strips for the sloping verges. When using the IKO Armourglass Plus Square Butt Shingles cut off the tabs from a single shingles strip to create the sloping “verge-edging” pieces. You may prefer to cut through the shingle from the back and cut onto a board so as not to damage the knife blade or anything underneath. These “verge-edging” pieces should be applied first and positioned extending 50mm beyond the edge of the roof.

If a barge board is present on a garden building, it should be removed and reinstated when the shingles have been installed.

Gently fold these verge pieces over the roof edge, taking care to warm the material first in cold conditions so it is more pliable, nailing at 50mm centres. At the corners cut the IKO Roofing Shingles to allow an overlap when folded around the corner and nail this in position.

Step 4

Position the eaves shingle strips

For the eaves sections use a full shingle strip, turned with the tabs facing up the roof. Position these strips overhanging the roof edge by 50mm. Starting at the left hand eaves corner, place the reversed shingle on to the roof extending 50mm beyond both edges (for ease of detailing at the corner, cut away the edge at an angle – as seen in Fig. 1). At the joints between individual shingle strips, use the tabs (that were previously cut to make the “verge edging”) as soaker pieces.

Place the eaves strips in position and gently fold over the roof edge and nail into final position. Ideally nails should be placed 25mm from each end, just below the line of the cut-outs, with three more nails on a horizontal line between the first two immediately below each cut-out. Holding the shingle in position with one hand, gently fold the overhang over the edge of the roof, extending beyond the underside of the decking to form a drip edge. Once folded, nail fix at 50mm centres.

Continue along the eaves of the roof in the same manner, using the tabs previously cut off of the shingles for the sloping verge as soaker pieces between each shingle strip.

You should cut away the corner of the shingle at an angle to prevent a build-up of laps.

Now all your perimeter detailing should be complete verges, corners and eaves.

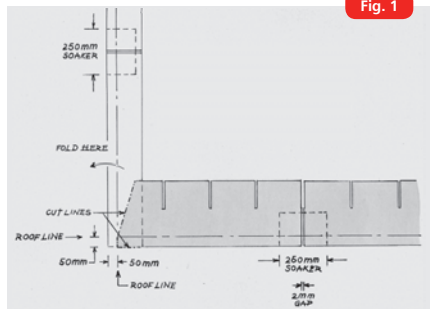


Fig. 1

Step 5

Alignment of the first shingle course

Now set out the position for the first shingle course using either a chalk line or straight edge approximately 5mm from the roof edge.



Step 6

Position and fix the first shingle course

Trim half, that is 125mm from the verge tab of the first shingle course (row), and continue with full shingles for the rest of the course. Leave a 2mm gap between shingle strips. See Fig. 2. Repeat this for all odd numbered courses.

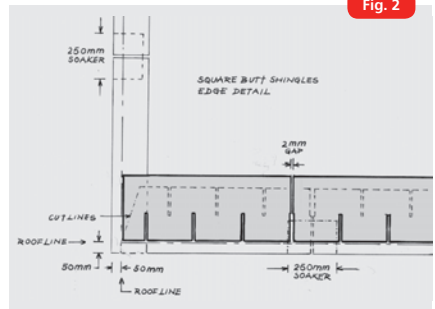


Fig. 2

Step 7

Position and fix the higher courses

Use whole shingle strips for the placing of the second and all further even numbered courses creating a staggered effect as shown in the illustration. See Fig. 3.

For normal fixing, shingles should be nailed 25mm above each cut-out and 25mm in from each edge.

Continue to fix the shingle strips up the roof, creating a staggered effect. The bottom edge should just overlap the top of the cut-outs of the underlying shingles so that there will be approximately 145mm of each shingle exposed.

Roofing adhesives can be used sparingly, covering the nail heads of individual fixing points and in the corner of each tab. This also gives added security in exposed locations.

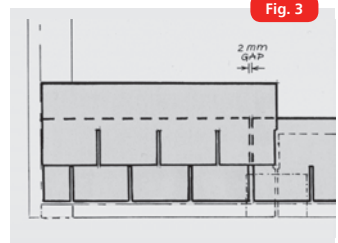


Fig. 3

Step 8

Cut IKO Roofing Shingles to create ridge shingles

To finish the roof we make the ridge capping. For the ridge, IKO Roofing Shingles must be cut from the shingle strips, inline with the cut-outs. See Fig. 4.

Four ridge shingles can be cut from each shingle strip. Shingles can be more readily cut if scored on the back, allowing the shingle to separate away easily. Alternatively you can cut from the front, or mineral side (as shown).

To assist in making the ridge shingles lay flat, make secondary cut lines as shown in the illustration.

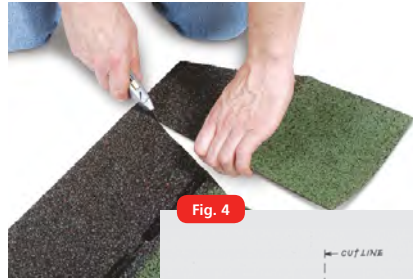
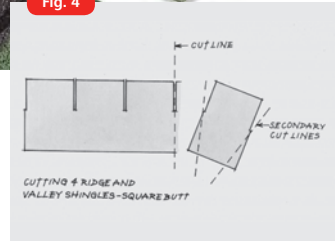


Fig. 4



Step 9

Alignment of the ridge shingles

Use a chalk-line or straight edge to ensure the correct positioning of the individual ridge shingles.



Step 10

Position and fixing of ridge shingles

On the ridge of the roof each ridge shingle should overlap the previous one, as shown, exposing approximately 145mm.

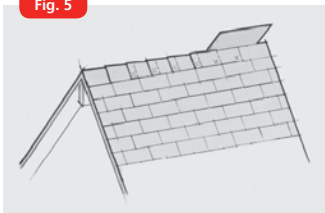


Step 11

Seal the lap joints in the ridge shingles

A bead of IKOpro High-Performance Felt Lap Adhesive should be used to seal the joint. Bed down onto 25mm strips of IKOpro High-Performance Felt Lap Adhesive to seal the open ends.

Fig. 5



Step 12

Position and fix of the ridge shingles

Continue to fix the ridge shingles along the roof ridge, bending lengthways down the centre to achieve equal exposure on both sides of the ridge as shown in Fig. 5. In cold weather remember to warm the shingles before folding. Seal the lap and nail fixing on both sides.



Shingle application in valleys

Cover the valley with the 1m wide IKO Glass Fibre Underlay 20m (Type 3B). Vertical laps if unavoidable should be a minimum of 300mm and sealed with IKOpro High-Performance Felt Lap Adhesive. Nail at 400mm intervals 25mm from the edge. Then lay the main roof underlay so that it goes over the valley and overlaps the adjacent roof plane by 300mm. Cut this parallel to the valley then seal with IKOpro High-Performance Felt Lap Adhesive. The underlay on the opposite roof plane would similarly overshoot the valley by 300mm and would also be cut parallel and then sealed with IKOpro High-Performance Felt Lap Adhesive. Do not nail within 150mm of the valley centreline. For best performance, start applying shingles on the roof plane with the lower slope or biggest surface. The starter strip must be woven (extend 250mm onto adjoining roof plane). Do not nail within 150mm of the valley centreline. Use one extra nail at the end of each shingle crossing the valley. After completing this roof plane, snap a chalk line 50mm from the centre line on the roof plane still to cover. Apply the shingles onto the second plane, trim shingles to the line and cut a 50mm triangle off the top corner to direct water into the valley. Glue the valley end of each shingle with IKOpro High-Performance Felt Lap Adhesive. Do not nail within 150mm of the valley centreline. Always arrange layers so that water can run unobstructed to the gutter.

Step 13

The Completed Job

IKO Roofing Shingles provide a long lasting, attractive, decorated waterproofing finish to a wide variety of garden buildings.



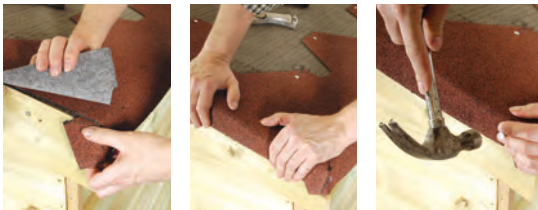
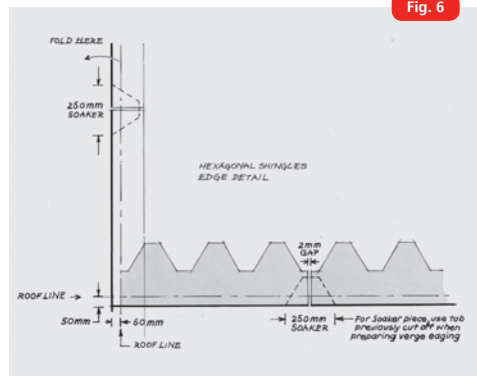
IKO Armourshield Hexagonal Roofing Shingles

Fixing Hexagonal Roofing Shingles - A few differences

Using IKO Armourshield Hexagonal Shingles is similar, but differences arise because unlike the Square Butt Shingles, Hexagonal Roofing Shingles have an adhesive surface on the reverse of each tab, protected by removable film.

Prepare your roof deck with underlay as detailed for Square Butt Roofing Shingles. Creating the "verge-edging" pieces means cutting off the hexagonal tabs from a shingles strip and removing the release film.

When positioning the verge edging piece, it is again important to allow a 50mm overhang at all edges. Remember to use a full shingle, turned with the tabs facing up the roof, overhanging the roof edge by 50mm. At joints between individual shingles strips, use one of the 3 hexagonal tabs (that has been cut off when you made the verge edging) as a soaker piece as shown in Fig. 6.



Folding the Eaves Roofing Shingle

Now gently fold the verge pieces over the roof edge, taking care to warm the shingles in cold conditions. As shown correctly position the eaves shingle, gently fold over the roof edge and nail in position, cutting the corner details allowing overlaps to be folded around the corners before nailing into position.

Removal of the release backing

Before applying IKO Armourshield Hexagonal Roofing Shingles, always remove the release sheet backing to expose the heat activated adhesive coating. But do not remove the backing until you are ready to fix the shingle.



Alignment of the first shingle course

In order to position and fix the first shingle course, trim 166mm from the verge tab of the first shingle course. Repeat this for all odd numbered courses. Set out the position for the first shingle course so that the edge of the shingle strip is aligned 5mm from the edge of the roof. Ensure that the shingle cut-out of the first shingle course aligns with the reversed shingle tab from the eaves shingle strip. Position and fix the higher IKO Roofing Shingles courses.



Next position and fix subsequent courses

For the second course, continue with full shingles strips for the rest of the course. Use whole shingles for the second and all even numbered courses. For normal fixing, shingles should be nailed 25mm in from each edge and above each cut-out, along a line 25mm above the cut-outs.

Now for the remaining courses, simply continue to fix the shingle strips up the roof, creating a staggered effect, as seen here. The bottom edge should just overlap the top of the cut-outs of the underlying shingles so that there will be approximately 135mm of each shingle exposed.

Use IKOpro High-Performance Felt Lap Adhesive to cover the nail heads of individual fixing points and in the corner of each tab, for added security in exposed locations, prior to heat activation of the tab coating.

Finally to finish the roof ridge capping, the ridge shingles must be cut from the shingle strips, inline with the centre of the cut-outs. Three ridge shingles can be cut from each Hexagonal Shingle strip. These ridge shingles should be nailed both sides of the ridge apex and nail fixings covered by the next ridge shingle.



The Completed Job

IKO Hexagonal IKO Roofing Shingles provide a long lasting attractive decorative waterproofing finish to a wide variety of garden buildings.



Additional Information

Roof Ventilation

When IKO Roofing Shingles are used on heated buildings or insulated roofs, ventilation of the void space must be provided. For cold roofs ventilation should be at least equal to continuous strip 10mm wide (Ref: BS 5250:2002).

Additional Weather Considerations

Whilst IKO Roofing Shingles are designed for application on pitched roofs of 15° and over, in severe exposed locations it is recommended that the roof pitch should be a minimum of 30.

Exposure categories as defined in BS5628: Part 3.

Building Regulations

IKO Armourglass Plus and Armourshield IKO Roofing Shingles comply with Building Regulations: England, Wales, Scotland and Northern Ireland. However, they must be installed in accordance with BS 5534: 2003 Code of Practice for Slating and Tiling (including Shingles). Contact IKO Technical Services for guidance.

Suitable Decking

The following decking materials are suitable for the fixing of roof shingles.

- Exterior grade plywood (18mm)
 - OSB 3 Conditioned Boarding (18mm)
 - Plain edge timber boarding (25mm)
- Note:** Chipboard (including pre-felted) is not recommended as decking.

Storage

Store shingles inside a ventilated area. Do not stack Square Butt Shingles more than 16 packs high and Hexagonal Shingles more than 14 packs high. Pallet loads must not be stacked directly upon each other.

Store away from direct heat and sunlight.

In cold weather, store packs inside before use and gently warm before folding.

A roofing shingle pack weighs between 28.5kg and 32.4kg depending on the product type. The usual precautions should be taken when handling heavy objects.

Handling

Handle Roofing Shingle strips carefully in cold weather to prevent cracking or breaking, and in hot weather to protect edges. Do not drop packs on their edges.

Fixing

To improve adhesion of the shingles strips, the IKO Armourglass Plus Square Butt Shingles have a heat sensitive bituminous strip on the top side. The Armourshield Hexagonal Shingles have an adhesive surface on the reverse of each tab, protected with a removable film.

IKO Armourglass Plus Square Butt Roofing Shingles

The polythene film strip on the back of the Square Butt Shingles prevents them sticking together during transit and storage. Do not attempt to remove the film.

IKO Armourshield Hexagonal Roofing Shingles

The release sheet must be removed from the back of the Hexagonal Shingles.



View our online installation
video at www.ikogroup.co.uk



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