



UAC BERHAD



UAC ROOFING SHINGLES

Versatile!

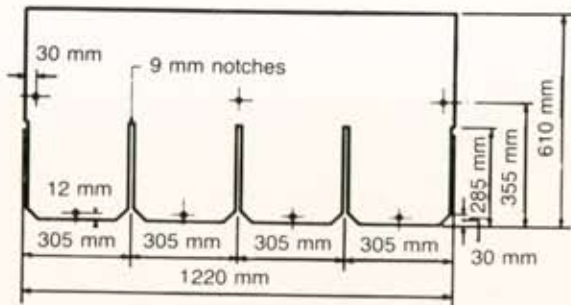
Distinctive!

**Combine elegance
with 'old world'
charm.**

For new homes or commercial projects, re-roofing of older homes or restoration of historic buildings, UAC Roofing Shingles provide a distinctive alternative to other roofing materials.

UAC Roofing Shingles are manufactured from single faced sheet machined to produce four shingles per sheet. UAC Roofing Shingles are available in natural grey.

UAC Roofing Shingles can be set as low as $17\frac{1}{2}^{\circ}$ with sarking, or $22\frac{1}{2}^{\circ}$ without sarking. UAC Roofing Shingles combine a neat, crisp appearance with style, elegance and 'old world' charm. They are virtually maintenance free, and may be used for walling and roofing new homes, commercial and civil projects, re-roofing older homes, or restoration of historic buildings.



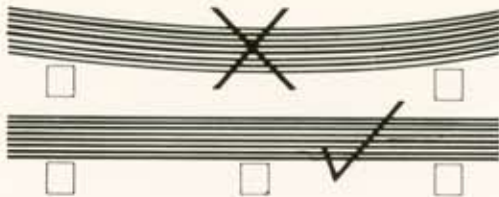
NOMINAL DIMENSIONS (mm)

	Shingles	Starter Sheets
Width	1220	1220
Depth	610	355
Thickness	4.5	4.5
Coverage	325 per 100 m ²	

Mass: approx. 4.0 kg/m² of finished roofing (based on average moisture content.)

STORAGE

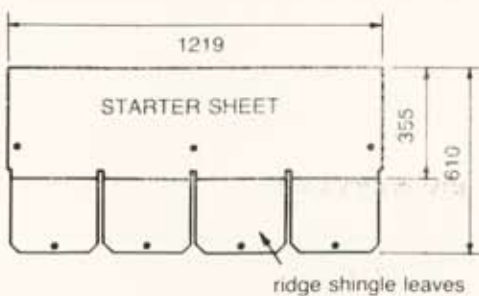
UAC's Roofing Shingles must be kept dry at all times prior to erection, preferably under cover such as shed or roofing overhang. If covered with plastic sheeting or tarpaulins, ensure there is adequate provision for 'breathing'. Stack on level seating.



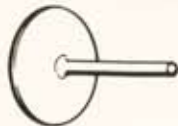
ACCESSORIES AND FIXINGS

Starter Sheet: 1220 x 355 mm x 4.5 mm

Note: Starter sheets can be made up on site from full shingles, the off cuts providing ridge shingle 'leaves'.



Crampons



Clouts

2.8 mm hot dipped galvanised clouts. 40 mm long for use with softwood battens. 30 mm long for use with hardwood battens.



Ridge and Hip Fixing Screws

40 x 10g zinc or cadmium plated round head wood screws with neoprene/metal bonded washer.



Flashing

Bitumen coated aluminium flashing.

DESIGN CRITERIA

ROOF PITCH

The minimum recommended roof pitch is 17°. The following table outlines recommended design criteria for various roof pitches and degrees of exposure.

Roof Pitch	Specification
17° to 22 1/2°	Foil Sarking recommended
Exposed conditions	Where roof pitch exceeds 22 1/2°, Foil Sarking recommended
22 1/2° plus	Under normal conditions no sarking required
Design Wind Velocity	Shingles are not recommended for use on structures having a design velocity exceeding 33 m/sec.

FIXING INSTRUCTIONS

ROOF FORMING

All primary roof framing should be constructed in accordance with good building practice and comply with local building regulations.

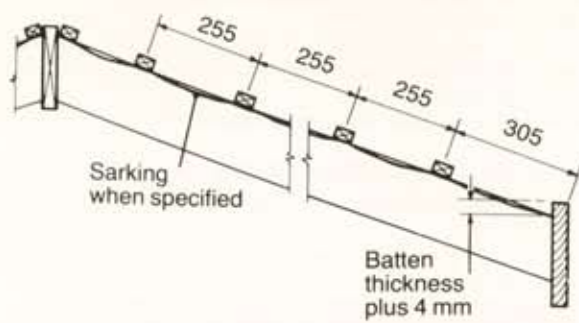
The following table outlines minimum batten sizes for a range of rafter spacings.

Rafter Spacing (mm)	Minimum Batten Sizes (mm)
450	22 x 45
600	35 x 45
900	35 x 45
1200	45 x 45

Tops of all ridge and hip boards should be set level with or below the tops of the battens. Fascias should be nailed to the ends of rafters, with the top edge projecting above the rafters by the batten thickness plus 2.0 mm.



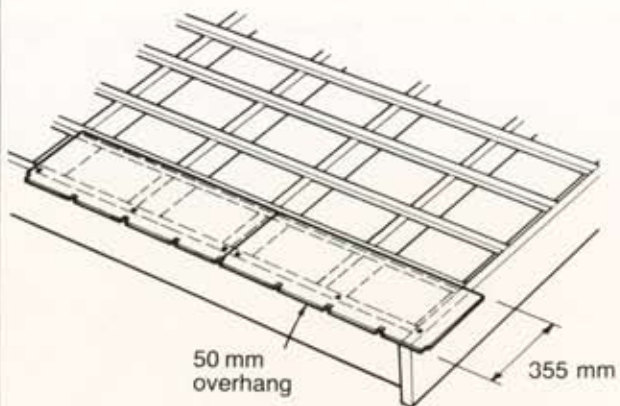
Fixing Procedure



1. FIX BATTENS

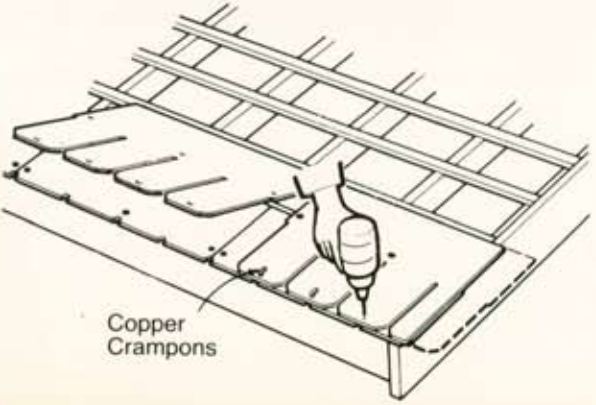
Nail battens to each rafter in straight and parallel runs. (see diagram for spacing).

When sarking is used, it should be run in continuous lengths **across** the rafters & lapped between courses **before** fixing the shingle battens.



2. FIX STARTER SHEETS

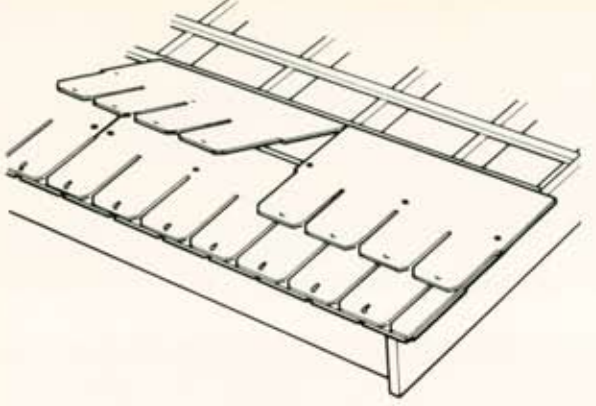
Cut starter sheets from whole shingles. Position each starter sheet with the top-edge located on or just below the centreline of the first batten. Fix to the top of the fascia with 30 x 2.5 mm hot dip galvanised clouts. Butt starter sheets closely together.



3. WORK UP THE ROOF

First Course

Start by cutting 150 mm from the first 'leaf' of the first shingle (to allow joints between shingles to be staggered in successive courses). Align the bottom and side edge of the first shingle with the starter sheet and fix into position. Close butt and fix second and successive shingles until first course is completed. Using predrilled holes as a guide drill through starter sheet and fix each leaf with copper crampions.

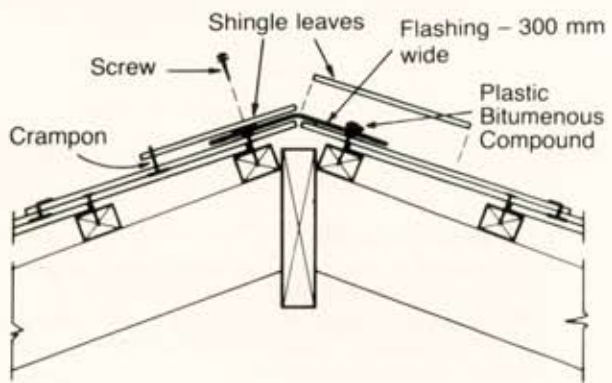


Second Course

Start second course with a full shingle. Align crampton holes with the slots in the first course. Fix the second course in position.

Third and Successive Courses

Start the third course as for the first course, ensuring that the crampton holes align with the slots of the second course. Fix into position. Top edges of shingles should locate on or just below the centre line of the battens: Continue fixing up to the ridge line, commencing alternate courses as stated. The top courses of shingles on opposite roof slopes should be cut so that the top edges touch over the centre line of the ridgeboard.



4. RIDGE

The last course of shingles for both slopes should be cut so that the top edges touch. Fix a continuous ridge flashing of 300 mm wide, then fix the shingle leaves (refer to notes on cutting of starter sheets) in position with copper crampions through the holes provided. In addition fix each leaf with two 40 x 100 mm zinc or Cadmium plated round head wood screws and neoprene bonded washers. Before screws are inserted, lift shingle leaf and apply Plastic Bitumenous Sealing Compound liberally around screw hole area. Replace shingle leaf and screw down.

5. FIX COPPER CRAMPIONS

Crampon fixing should be carried out within 24 hours of laying shingles. Start at the second shingle course, and work up the roof course by course. Insert copper crampions into the slots between the shingle leaves. Gently lift the edge of the shingle in the next course to allow the projecting shank of each crampton to be pushed through the holes provided. Firmly bend over each crampton shank at right angles and towards the ridgeline. This will ensure that each course of shingles is held in close contact with the previous course.

