

Metrotile Roofing over Flat to Pitched Conversion Specification



Rectory Green; Prestwich

**Metrotile Roof Systems Project Specification Prepared for:
Mr Dion C Woods**

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Specification Reference Number – ML21/0200

Profile: Metrotile Bond 450 – Colour Charcoal



NBS Model Specification – Metrotile UK Ltd - Bond 450 Tile.

This model specification is designed for specifiers of Metrotile Roof Systems products who require National Building Specification clauses (NBS), for sections H67 Single Lap Metal Roof Tiles. The model specification provided below is not designed to be exhaustive and is given in good faith.

The purpose/extent of the enclosed model specification is to provide an indicative outline of the general processes required to complete a successful Metrotile Roof. It is not the intent of this model specification to provide step by step guidance covering all aspects and issues that may be relevant to the installation of your specific project. Installers must always follow Metrotile's installation instructions (available at www.Metrotile.co.uk) or contact Metrotile Roof Systems technical support team if in doubt.

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Important Notes:

Metrotile recommends that a site survey be undertaken by persons tendering the contract. It shall be the responsibility of the successful contractor to ensure that all necessary preparation and working practices are achieved to produce a level of workmanship and finished appearance resulting in client satisfaction.

Contractors must at all times follow the instruction contained within the Metrotile's installation instructions (available at www.Metrotile.co.uk) or contact Metrotile Roof Systems technical support team if in doubt.

Where there is a requirement for additional products and execution clauses that fall outside the scope of NBS H67 (Single Lap Metal Roof Tiles) it is the specifiers responsibility add these clauses to the specification from the relevant NBS section.

This model specification is NOT a Police Preferred Secured by Design specification. If you require a Secured by Design specification contact Metrotile's Sales Support and Technical Services team on 01249 658514.

The Generic Model Specification shown below assumes a timber trussed structure with trusses not exceeding 600mm centres. Roof pitch 12° and greater and cold roof structure.

Metrotile Bond 450 Description:

Metrotile Bond 450 is suitable for the vast majority of standard applications, whereas Metrotile Bond 900 offers added security and safety for applications which may require additional resistance to foot traffic or protection from vandalism.

Each tile is the equivalent of eight conventional roof tiles and may be fixed from vertical right down to a 10° pitch; tiles are overlapped and then fixed, providing excellent strength and durability

Product guidance:

Size:

1330 x 370 mm.

Minimum pitch:

10°.

Maximum pitch:

90°.

Side lap:

64 mm.

Coverage:

0.46 m².

Weight:

6.2 kg/m².

Product specification:

Manufacturer:

**Metrotile UK Ltd
Unit 3
Sheldon Business Park
Sheldon Corner
Chippenham
Wiltshire
SN14 0RQ**

Tel: +44 (0)1249 658514

www.Metrotile.co.uk

sales@Metrotile.co.uk

Rafter Centres	Batten Size
450mm	25 x 50mm
600mm	25 x 50mm
900mm	50 x 50mm
1200mm	50 x 50mm
1500mm	50 x 65mm

Flat to Pitch Roof Framing System

A site adjustable, site installed lightweight galvanised steel structural system for converting existing flat roofs into sloping roofs and can be designed either as a dead load support system bearing through the existing roof deck onto load bearing structure.

Dead Load System

The dead load system is designed to be secured through the existing roof deck onto load bearing structure. It is designed to provide support for a Metrotile metal roof system fixed to timber tile battens.

Metrotile Lightweight Metal Roof Tile Roof Covering

The dead load system comprises tilt frames, base and rafter 50x50x50 zed sections and height adjustable props. The support props are adjustable on-site to suit variations in existing roof levels. Gutter and fascia/soffit support assemblies are also available as part of the complete roof system. The system can be erected without the need to evacuate the building.

Coverings: This specification is designed to be used where a Metrotile metal tile is fixed to 50 x 50 timber tile battens.

Because each flat roof conversion is unique, a full design and specification service will be provided by Metrotile's partner, Dibsa Structures. The provision of all necessary structural engineering calculations is obtained once an order has been received. It is recommended that the structure supplier is consulted early in the design process, as this would ensure a smoother process with many design issues ironed out early on.

Tilt Frame Assembly

Base members:

50 x 50 x 50 x 1.5mm zed sections unless otherwise stated, secured through the existing roof deck into the structure beneath with fixings supplied by the Roofing Contractor and to the approval of design criteria. Base members are to be positioned in order to ensure that the new roof load is evenly distributed over the existing roof structure.

Height adjustable props:

Comprising a 41 x 41mm channel section sleeve and an enclosed channel section insert, the props are located beneath each tilt frame at maximum 1200 centres and attached to the base member. After fixing to the base member, the prop is to be adjusted to the correct rafter height and secured.

Rafter members:

50 x 50 x 50mm Zed sections, unless otherwise stated, are to be fixed over and between the height adjustable props to complete each tilt frame.

Bracing

Gable bracing:

To be located at the gable ends of each new structure and as indicated on Metrotile/Dibsa Structure Site Drawings and to comprise angle sections fixed between the top of the gable props and the bottom of the neighbouring props on the next tilt frame.

Tilt Frame bracing: To be installed at each tilt frame with a single angle brace member fixed between the top of the ridge prop and the bottom of the next lower prop in the same tilt frame line.

Horizontal bracing: On structures standing over 1500mm above the existing roof level, horizontal bracing is to be fixed at 1500mm vertical lifts, in the direction of both purlin lines and tilt frame lines.

Hip & Valley Assemblies:

Hip/Valley rafters:

Angle section hip/valley rafters installed between the props (along the hip and valley lines) and secured with fixings.

Fascia/Soffit Support Frames:

Fascia depth: Available from 100 to 300mm as required

Soffit width: Available from 50 to 1500mm as required

Support frame:

Comprising a sleeved wall plate, inverted top hat section soffit support and sleeved fascia support prop fixed to existing structure and in line with the appropriate tilt frame assembly. Position to line and level and securely fix in position.

Horizontal support rails:

Install as shown on site drawings.

H67 METAL SINGLE LAP ROOF TILING

To be read with Preliminaries/ General conditions.

GENERAL

110 METAL ROOF TILING TO Rectory Green; Prestwich M25 1BR

- Substrate: Trussed rafters at 600mm centres (Assumed).
- Pitch: 15° and greater
- Underlay: Metrotile High Performance Breather Membrane.
 - Direction: Parallel to eaves.
 - Head-lap (minimum): 300mm – for 12° pitch, 225mm – for 12.5° to 14° pitch, 150mm – for 15° to 34° pitch, 100mm – for 35° pitch and above.
- Battens:
 - Size: 50 x 25mm
 - Gauge: 370mm
 - Fixing: Strictly in accordance with manufacturer instructions
- Tiles:
 - Manufacturer: Metrotile UK Ltd.
Product reference: Metrotile Bond 450 Tile
 - Finish and durability: To meet the specified performance requirements. the metal tile and accessories required must; (1) Be manufactured from high quality steel and zinc/aluminium/magnesium galvanised for maximum performance and durability. (2) Have a mandatory polyester coating on underside. (4) Subsequent acrylic resin coatings must have a non-toxic fungicide incorporated into the coating for added protection. (5) Have a stone granular finish, which must be ceramically colour glazed before being added to the resin coating, giving a good covering with no gaps between the granules. (6) Have a finishing coat of a clear acrylic resin, incorporating a U.V inhibitor, applied over the granules. (7) Manufactured to ISO 9000 Quality Standards and ISO 14001 Environmental Management Systems. (9) Be independently assessed to have a product life span of in excess of 40 years.
 - Colour: Charcoal
 - Size: 1330 x 370mm
 - Gauge: 370mm
 - Bond: Straight bond – recommended for simple shapes (i.e. gable to gable roofs).
Broken bond – recommended for complex shapes (i.e. hip and valley roofs).
 - Fixing: 4 no coated Metrotile nails or screws per tile located in positions as recommended in Metrotile Roof Systems installation guides
- Other requirements: 40 years Weather Security Guarantee (consult with Metrotile for details and conditions)

PRODUCTS

310 BATTENS/ COUNTERBATTENS - TREATED

- Timber: Sawn softwood.
 - Standard: BS 5534, clause 4.12.1.
 - Permissible characteristics and defects: Not to exceed limits in BS 5534, Annex C.
 - Moisture content at time of fixing and covering (maximum): 22%.
- Preservative treatment: As section Z12 and British Wood Preserving and Damp-proofing Association Commodity Specification C8.
 - Type: Organic solvent (OS) or CCA as appropriate – see NBS section Z12, table 4.
(Note: CCA treated wood must not be used in residential or domestic construction).

320 EAVES UNDERLAY SUPPORTS

- Type: Plastic underlay carrier.
- Manufacturer: Metrotile UK Ltd
 - Product reference: Metrotile EAVES FASCIA TRAY

325 EAVES VENTS

- Type: Fascia mounted ventilator with a continuous rafter roll eaves ventilation tray and gutter spacing brackets.
- Manufacturer: Metrotile UK Ltd.
 - Product reference: Metrotile OVER FASCIA 10mm Eaves Ventilation System, in accordance with manufacturers recommendations

335 VERGE CAPS

- Manufacturer: Metrotile UK Ltd.
 - Product reference: Metrotile Barge Covers (Handed)

340 HIP CAPS

- Manufacturer: Metrotile UK Ltd.
 - Product reference: DELTA RIDGE
- Accessories: Metrotile Batten Tray - this is a required component for Metrotile Bond 450

345 VALLEYS

- Manufacturer: Aluminium, Lead or GRP Valley Troughs complying with the requirements of BS 5534
- Product reference: Valley to be formed from metal sheet (or code 5 lead) or moulded glass fibre or similar approved lining, supported on valley boarding. See Lead valleys (if required to client's specification) in NBS sections: H71 – lead.

360 TOP ABUTMENT (UNVENTILATED METAL PROFILE UPSTANDS

- Manufacturer: Metrotile UK Ltd.
 - Product reference: Metrotile Top Course Flashing & Metrotile Batten Tray

360A TOP ABUTMENT (VENTILATED) METAL PROFILE UPSTANDS

- Manufacturer: Metrotile UK Ltd.
 - Product reference: Metrotile Delta Ridge & Metrotile Batten Tray to provide a ventilated top abutment (see clause 385)

375 RIDGE CAPS

- Manufacturer: Metrotile UK Ltd.
 - Product reference: Delta Ridge
- Accessories: Metrotile Batten Tray - this is a required component for Metrotile Bond 450

- 380 MONO-RIDGE CAPS
- Manufacturer: Metrotile UK Ltd.
 - Product reference: Delta Ridge
 - Accessories: Metrotile Batten Tray - this is a required component for Metrotile Bond 450
- 385A STRIP VENTILATORS
- Manufacturer: Metrotile UK Ltd.
 - Product reference: Metrotile Batten Tray
 - Location: Ridges and top edge abutments
- 395 ROOF SLOPE VENTILATORS
- Manufacturer: Metrotile UK Ltd.
 - Product reference: Metrotile COWL VENT - 7,500mm² (with spigot)
 - Location: TBA by Client
- 400 ROOF SLOPE TERMINALS
- Manufacturer: Metrotile UK Ltd.
 - Product reference: Metrotile IN LINE VENT - 20,000mm² (with spigot)

EXECUTION

- 605 BASIC WORKMANSHIP
- General: Fix metal tiling and accessories to make the whole sound and weathertight at earliest opportunity.
 - Setting out: To regular appearance, with neat fit at edges, junctions and features.
 - Fixings of accessories: As recommended by metal tile manufacturer.
 - Metal tiles: Laps must face away from valley or rainwater discharge pipes on roof.
 - Cut metal tiles: Cold cut and treat as recommended by manufacturer. Tiles and accessories must not be cut with an angle grinder.
 - Flashings: Fix with or immediately after metal tiling. Form neatly.
- 610 REMOVING EXISTING TILING
- General: Carefully remove tiles, battens, underlay, etc. with minimum disturbance of adjacent retained tiling.
- 615 FIRE SEPARATING WALLS
- Separating walls: Completely fill space between top of wall and underside of metal tiles with mineral wool quilt to provide fire stopping.
 - Boxed eaves: Completely seal air paths in plane of separating wall with wire reinforced mineral wool, not less than 50 mm thick, fixed to rafters and carefully cut to shape to provide fire stopping.
- 625 LAYING UNDERLAY
- Handling: Do not tear or puncture.
 - Laying: Maintain consistent tautness.
 - Vertical laps (minimum): 100 mm wide, coinciding with supports and securely fixed.
 - Fixing: Aluminium or steel coated by zinc or zinc alloy, 20 x 3 mm clout head nails.
 - Eaves: Where exposed, underlay must be BS 747/ BS 5534, Annex A Type 5U, or an equivalent UV durable type.
 - Penetrations: Use proprietary underlay seals or cut underlay to give a watertight fit around pipes and components.
 - Ventilation paths: Do not obstruct.

645 FIXING BATTENS - ROOF TILING

- Setting out: Align parallel to ridge in straight horizontal lines to gauge required by the metal tile. Align on adjacent areas.
- Batten length (minimum): Sufficient to span over three supports.
- Joints in length: Square cut. Butt centrally on supports.
 - Rafters up to 600 mm centres: Not more than one batten joint in any four consecutive battens on the same support.
 - Rafters over 600 mm centres: Stagger batten joints to avoid coincidence on same support.
- Additional battens: Provide where unsupported laps in underlay occur between battens.
- Fixing: Each batten to each support. Skew fix at joints in length.

655 FIXING METAL TILES

- Setting out: Lay each course to specified bond.
- Side laps: 64mm
- Fixing: As recommended by metal tile manufacturer.
 - Nail heads: Treat vertically driven nail heads with Metrotile finishing kit.

660 VENTILATED EAVES FOR COLD ROOF CONSTRUCTION

- Eaves vents: Fix to top of fascia board.
- Ventilator trays: Fix to provide free passage of air over insulation.
- Underlay support: Continuous to prevent water-retaining troughs.
- Gutter: Dress underlay or underlay support tray to form drip into gutter. Ensure gutter brackets are fixed to provide a ventilation path to eaves vents.
- First course metal tiles: Fix with tails projecting 40 mm over gutter or to centre of gutter, whichever dimension is the lesser Seal the heads of vertically driven nails with Metrotile finishing kit.
 - Fixing: Fix with 4no. Metrotile nails on each side
- Manufacturer: Metrotile UK Ltd.

670A VERGES

- Barge board: The top of the barge board should be level the top face of the battens
- Underlay: Carry over full width of verge and turn up face of barge board.
- Battens: Carry over underlay and finish adjacent to barge board.
- Verge fixing batten: Size: 2no. 50 x 38mm
 - Fixing: To battens and external face of bargeboard
- Metal tiles: Cut and form to an upstand.
- Verge and end caps: Fix with 4no. Metrotile nails on each side.

680 VENTILATED HIPS

- Underlay: Lay to provide a 10 mm air gap centred on the hipline.
- Hip fixing battens:
 - Minimum Size: 50mm x 25mm
 - Fixing: To battens.
- Metal tiles: Cut and form to an upstand.
- Ventilator: Universal Vent Strip. Position on metal tile to allow fit of ridge cap.
- Hip and end caps: Fix through continuous line of ventilator to face of fixing battens with 4no. Decra nail on each side of the D Ridge.

690 LAYING GRP VALLEY

- Valley boards: Locate in a position suitable to accept metal tiling.
- Underlay: Lay as recommended by GRP valley manufacturer.
- Battens: Project over valley to provide fixing for metal tiles.
- Metal tiles: Cut adjacent tiles to fit neatly, allowing sufficient downturn to cover battens.
 - Valley width between tiles: as appropriate to comply with the requirements of BS 5534

695 LAYING METAL VALLEY

- Valley boards: Locate in a position suitable to accept metal tiling.
- Underlay: Cut to rake and dress over tilting fillets to lap onto metal valley. Ensure underlay is not laid under metal.
- Battens: Project over valley to provide fixing for metal tiles.
- Metal tiles: Cut adjacent tiles to fit neatly, allowing sufficient downturn to cover battens.
 - Valley width between tiles: as appropriate to comply with the requirements of BS 5534

700 SIDE ABUTMENTS WITH METAL PROFILE UPSTAND

- Underlay: Turn up not less than 100 mm.
- Metal tiles: Cut and form to an upstand.
- Side abutment metal profile: Fix as recommended by manufacturer.
- Flashing: Dress over metal profile upstand.

705 SIDE ABUTMENTS

- Underlay: Turn up not less than 100 mm.
- Metal tiles: Cut and form to an upstand.
- Flashing: Dress over metal tiles.

710A TOP ABUTMENTS (UNVENTILATED) WITH METAL PROFILE UPSTAND

- Underlay: Turn up not less than 100 mm.
- Battens: Position and fix to suit metal profile upstand.
- Abutment fixing battens:
 - Size: 50mm x 25mm
 - Fixing: Install over Metrotile Ridge/Hip sealing strip (Ref: 0.9 Expanding Hip Sealer 4m) to battens.
- Metal tiles: Form 75mm upturn and cut off surplus.
- Top abutment metal profile: Fix as recommended by manufacturer.
- Flashing: Dress over metal profile upstand.

720A VENTILATED TOP ABUTMENTS WITH METAL PROFILE UPSTAND

- Underlay: Provide 5 mm air gap at abutment.
- Battens: Position and fix to suit metal profile upstand and maintain air gap.
- Metal tiles: Form 75mm upturn and cut off surplus. Maintain air gap
- Abutment fixing battens:
 - Size: 50mm x 25mm
 - Fixing: Install over Metrotile Batten Tray through tile into underlying tile battens.
- Ventilator: Metrotile Batten Tray.
- Top abutment metal profile: Cut and bend Metrotile Delta Ridge or Metrotile Top Course/Flat Sheet to form a top course flashing unit and install as recommended by manufacturer.
- Flashing: Dress over metal profile upstand.

730 ROOF WINDOW PERIMETERS

- Tiling substrate work: Prepare roof structure as recommended by manufacturer.
- Underlay: Turn up not less than 100 mm at window surrounds under integral flashings/soakers.
- Metal tiles: Cut, bend and fix forming appropriate upstands and downturns to suit adjacent roof window.

740 VENTILATED RIDGES

- Underlay: Lay to provide a 10 mm air gap centred on the ridgeline.
- Battens: Position and fix to suit ridge cap profile.
- Ridge fixing battens:
 - Size: 50mm x 25mm
 - Fixing: Install over Metrotile Batten Tray.
- Metal tiles: Cut tiles and form a 25mm upturn. NB It is recommended that the upturn is created before the tile is cut, to facilitate installation
- Ventilator: Metrotile BATTEN TRAY.

760A VENTILATED MONO-RIDGES

- Underlay: Lay to provide a 5 mm air gap on the ridgeline.
- Battens: Position and fix to suit mono-ridge cap profile.
- Mono-ridge fixing battens:
 - Size: 50mm x 25mm.
 - Fixing: Install over Metrotile BATTEN TRAY.
- Metal tiles: Cut tiles and form a 25mm upturn. NB It is recommended that the upturn is created before the tile is cut, to facilitate installation.
- Ventilator: Metrotile BATTEN TRAY.
- Mono-ridge and end caps: Fix to face of fixing battens through continuous ventilator and to the ridge board.

765 INSTALLING ROOF SLOPE VENTILATORS

- Ventilator tiles:
 - Requirement: To ventilate roof void (for cold roof structures). To ventilate above insulation (for warm roof structures)
 - Position: As specified by client

770 CHANGE OF ROOF PITCHES

- Tiling substrate work: Set out battens at appropriate gauge from eaves to change of roof pitch. Set out battens at pitch change from front edge of batten. Fix next tile batten at appropriate gauge.
- Metal tiles: Fix courses above and below metal tile change in roof pitch to form a weathertight junction.

775 INSTALLING ROOF SLOPE TERMINALS

- Ventilator tiles:
 - Connect: As specified by client

COMPLETION

910 COMPLETION

- Roof area: Clean.
- Rainwater pipes, gutters and outlets: Clear.
- Metal tile profiles: Free from defects.
- Roof edges, junctions and features: Watertight.

LEADWORK & ASSOCIATED LEAD FLASHINGS:

As an alternative to the use of traditional lead flashings we have included in this specification for the use of proprietary lead substitute products.

NOTE: There are currently no specific NBS clauses produced for lead free waterproof flashing systems. For the purpose of this specification we have modified the clauses contained within NBS section H71 lead sheet coverings and flashings to suit a lead free waterproof flashing system. All users of this specification must verify the information and ensure that it is suitable for the particular project application for which it is required

H71 LEAD SHEET COVERINGS/FLASHINGS

To be read with Preliminaries/ General conditions. NOTE: There are currently no specific NBS clauses produced for lead free waterproof flashing systems. For the purpose of this specification we have modified the clauses contained within NBS section H71 lead sheet coverings and flashings to suit a lead free waterproof flashing system. All users of this specification must verify the information and ensure that it is suitable for the particular project application for which it is required

60A MATERIALS AND WORKMANSHIP GENERALLY:

- Lead Free Flashing Systems
 - Manufacturer: As approved by Metrotile UK Ltd Ltd
 - Product reference: Lead free waterproof flashing for use in all applications where lead is traditionally installed
 - Finish and durability: SEBS modified bitumen on a malleable aluminium mesh finished with a fine grey granular finish on the outer face and a polyethylene film on the inner face, or equivalent
 - Colour: Charcoal
- Site Work & Installation:
 - Product is installed and worked in a similar way to traditional lead flashing, without the need for protective measures, except for wearing gloves to protect from cuts.
 - Product may be cut with a sharp knife or tin snips.
 - When installed in exposed conditions, product should be mechanically fixed with appropriate stainless steel flat headed self drilling fasteners. Where fastening to Metrotile Tiles the fasteners should be installed in the same positions as the general positioning of the nails used to fasten the Metrotile roof tiles (e.g. Fasteners along the vertical plane of the roof should be located through the downturned nose as shown in the Metrotile's installation guides. Fasteners along the horizontal plane of the roof should be located 10mm from the high point of the pan for Metrotile Bond profiles, or located at the high points of the tile surface for Metrotile Stratos & Oberon Tile profiles).
 - is weldable with hot air gun or flame free welder.
 - Cut, joint and dress product neatly and accurately, to provide fully waterproof coverings/flashings, free from ripples, kinks, buckling and cracks.
- Comply with BS 6915 and good practice as described in the latest editions of 'The Lead Sheet Manual' published by the Lead Sheet Association, unless agreed otherwise.
- Ensure that finished flashings are fully supported, adequately fixed to resist wind uplift but also able to accommodate thermal movement without distortion or stress

15A PITCHED VALLEY LININGS:

- Lining: Metrotile Approved lead substitute, Design of valley and usage of valley lining material to comply with Metrotile Roof Systems Ltd installation guides and BS 5534, 2003, Code of Practice Slating and Tiling
- Fixing: Dress over, and beyond, tilting fillets and welt edges. Nail top edge of each sheet. Dress bottom edge neatly into gutter.

30A APRON FLASHINGS

- Material: Metrotile Approved lead substitute
- End to end joints: Laps of not less than 100 mm.
- Upstand not less than 75 mm.
- Cover to abutment: in accordance with Lead Sheet Association recommendations
- Fixing: Dress product into joint/chase and fix with wedges (cut from Metrotile Approved lead substitute) at not more than 300 mm centres. Product should be mechanically fixed with appropriate stainless steel flat headed self drilling fasteners see clause 60A

35A COVER FLASHINGS:

- Material: Metrotile Approved lead substitute
- End to end joints: Laps of not less than 100 mm.
- Cover: Overlap to upstand of not less than 75 mm.
- Fixing: Dress into joint/chase and fix with wedges (cut from Metrotile Approved lead substitute) at not more than 300 mm centres. Product should be mechanically fixed with appropriate stainless steel flat headed self drilling fasteners see clause 60A

45A STEP AND COVER FLASHINGS:

- Material: Metrotile Approved lead substitute
- End to end joints: Laps of not less than 100 mm.
- Dimensions:
Upstand: Not less than 85 mm.
Cover to roof: Not less than 150 mm.
- Fixing: Dress into joint/chase and fix with wedges at every course (cut from product) at not more than 300 mm centres. Product should be mechanically fixed with appropriate stainless steel flat headed self drilling fasteners see clause 60A

52A CHIMNEY FLASHINGS:

- Front apron: Metrotile Approved lead substitute
Length: Width of chimney plus not less than 150 mm underlap to each side flashing.
Upstand: Not less than 75 mm.
Cover to roof: in accordance with Lead Sheet Association recommendations
Fixing: Dress into joint/chase and fix with wedges (cut from Metrotile Approved lead substitute) at not more than 300 mm centres. Product should be mechanically fixed with appropriate stainless steel flat headed self drilling fasteners see clause 60A
- Back gutter: Metrotile Approved lead substitute
Length: Width of chimney plus not less than 100 mm overlap to each side flashing.
Upstand: Not less than 100 mm.
Gutter Sole: Not less than 150 mm.
Cover up roof: Not less than 225 mm.
- Back gutter cover flashing: Metrotile Approved lead substitute
Length: Width of chimney plus not less than 100 mm overlap to each side flashing.
Cover: Overlap to back gutter upstand of not less than 75 mm.
Fixing: Dress into joint/chase and fix with wedges (cut from Metrotile Approved lead substitute) at not more than 300 mm centres. Product should be mechanically fixed with appropriate stainless steel flat headed self drilling fasteners see clause 60A

65A EXISTING LEAD TO BE REMOVED will become the property of the contractor. The scrap value of such lead must be estimated by the contractor, itemised separately in the tender, and set against the tender sum.

70A REPLACEMENT OF EXISTING LEAD WITH LEAD SUBSTITUTE must be carried out in small sections at a time to reduce the risk of weather damage. Provide temporary waterproof coverings to prevent damage to the existing base and building.

75A TIMBER FOR USE WITH METROTILE APPROVED LEAD SUBSTITUTE:

- Planed, free from wane, pitch pockets, decay and insect attack except pinhole borers.
- Moisture content: Not more than 22% at time of covering.
Inform CA if moisture content greater than 16%.
- Preservative treatment: As section Z12 and British Wood Preserving and Damp-proofing Association Commodity Specification C8.
 - Type: Organic solvent (OS) or CCA as appropriate – see NBS section Z12, table 4.
(Note: CCA treated wood must not be used in residential or domestic construction).

84A WELTED JOINTS:

- Where a welted joint is necessary form with a 50 mm overlap, 25 mm underlap and mechanically fix with appropriate stainless steel flat headed self drilling fasteners at 450 mm centres.

90A WEDGE FIXING INTO JOINTS/CHASES:

- Carefully rake out joint/chase to a depth of not less than 25 mm.
- Dress into joint/chase and fix with wedges (cut from Metrotile Approved lead substitute) at not more than 450 mm centres, at every change of direction and with at least two for each piece of Metrotile Approved lead substitute.
- Prepare joint/chase and apply appropriate sealant.

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1. The enclosed information relates exclusively to products manufactured or distributed by Metrotile UK Ltd. The information is not designed to be exhaustive and is given in good faith. It is not the intent of this model specification to provide step by step guidance covering all aspects and issues that may be relevant to the installation of this project. Installers must always follow Metrotile's installation instructions (available at www.Metrotile.co.uk) or contact Metrotile Roof Systems technical support team if in doubt.
2. All users must verify the information and ensure that it is suitable for the particular project application for which it is required.
3. This model specification assumes that the new or existing roof structure is in a satisfactory condition and is built in accordance with accepted building practice. It is the client's responsibility to satisfy itself that the roof is structurally sound and that local conditions and current Health and Safety Regulations have been taken into account before any contract is undertaken.
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