

H72 ALUMINIUM STRIP/ SHEET COVERINGS/ FLASHINGS

To be read with Preliminaries/ General conditions.

TYPES OF ALUMINIUM WORK

GENERAL REQUIREMENTS/ PREPARATORY WORK

- 110 ALUMINIUM ROOFING: Kingspan Insulated panels
- Roofing system: KS1000 Topdeck Insulated 158mm roof system
 - Drawing reference(s): _____
 - Base: _____
 - Preparation included in this section: _____
 - Underlay: _____
 - Aluminium: As clause 520.
 - Alloy designation: _____
 - Temper: _____
 - Finish: Smooth
 - Thickness: 158 mm.
 - Longitudinal joints: _____
 - Spacing: _____
 - Cross joints: _____
 - Spacing: _____
 - Eaves detail: _____
 - Ridge/Hip detail: _____
 - Verge detail: _____
 - Other requirements: _____
- 510 WORKMANSHIP GENERALLY:
- Standard: Generally to CP 143-15.
 - Fabrication and fixing: To provide a secure, free draining and completely weathertight installation.
 - Operatives: Trained in the application of aluminium coverings/ flashings. Submit records of experience on request.
 - Measuring, marking, cutting and forming: Prior to assembly wherever possible.
 - Marking out: With pencil, chalk or crayon. Do not use scribes or other sharp instruments without approval.
 - Folding: With mechanical or manual presses to give straight, regular and tight bends, leaving panels free from ripples, kinks, buckling and cracks. Use hand tools only for folding details that cannot be pressed.
 - Surface protection: Fully coat surfaces to be embedded in concrete or mortar with high build bitumen based paint, after folding.
 - Sharp metal edges: Fold under or remove as work proceeds.
 - Joints: Do not use sealants to attain waterproofing.
 - Finished aluminium work: Fully supported, adequately fixed to resist wind uplift and able to accommodate thermal movement without distortion or stress.
 - Protection: Prevent staining, discolouration and damage by subsequent works.
- 515 WELDING:
- In situ welding: Not permitted.
- 516 WELDING:
- In situ welding: Permitted subject to completion of a 'hot work permit' form and compliance with its requirements.
- 520 ALUMINIUM STRIP/ SHEET:
- Standard: To BS EN 485, BS EN 507, BS EN 515 and BS EN 573.
 - Stamped or labelled with alloy designation, temper, finish and thickness.
 - Manufacturer: _____ .
 - Product reference: _____ .

- 525 COATED ALUMINIUM STRIP/ SHEET:
- Manufacturer: _____ .
 - Product reference: _____ .
- 580 EXISTING METAL REUSED:
- Handling/ Storage: Keep for reuse in the Works.
- 585 EXISTING METAL REMOVED TO REMAIN THE PROPERTY OF THE EMPLOYER:
- Type/ Location/ Extent: _____ .
 - Removal: Give notice when the metal is to be stripped.
 - Handling/ Storage: Keep for reuse by the Employer.
- 610 SUITABILITY OF SUBSTRATES:
- Condition: Dry and free of dust, debris, grease and other deleterious matter.
- 620 PREPARATION OF EXISTING TIMBER SUBSTRATES:
- Remedial work: Adjust boards to level and securely fix. Punch in any protruding fasteners and plane or sand to achieve an even surface.
 - Defective boards: Give notice.
 - Moisture content: Not more than 22% at time of covering.
- 640 TIMBER FOR USE WITH ALUMINIUM WORK:
- Quality: Planed, free from wane, splits, pitch pockets, decay and insect attack (ambrosia beetle excepted).
 - Moisture content: Not more than 22% at time of covering.
 - Preservative treatment: Organic solvent as section Z12, and British Wood Preserving and Damp-proofing Association Manual - Commodity Specification C8.
- 650 UNDERLAY:
- Handling: Prevent tears and punctures.
 - Laying: Butt jointed onto a dry substrate.
 - Fixing edges: With aluminium or galvanized steel staples or clout nails.
 - Do not lay over eaves and drip/ step aluminium underlaps.
 - Protection: Keep dry and cover with aluminium at the earliest opportunity.

FIXING

- 710 FIXINGS FOR CLIPS:
- Nails to timber substrates: Aluminium to BS 1202-3 for aluminium clips. Stainless steel (austenitic) for stainless steel clips.
 - Shank type: Annular ringed or helical threaded.
 - Shank diameter: Not less than 2.65 mm.
 - Head: Flat.
 - Length: Not less than 25 mm or equal to substrate thickness.
 - Screws to concrete/ masonry substrates: Sherardized or zinc plated steel to BS 1210, table 2, or aluminium to BS 1210, table 5 for aluminium clips. Stainless steel (austenitic) to BS 1210, table 4 for stainless steel clips.
 - Diameter: Not less than 3.35 mm.
 - Length: Not less than 25 mm.
 - Washers and plastic plugs: Compatible with screws.
 - Screws to composite metal decks: Self tapping, as recommended by the deck and aluminium manufacturer/ supplier for aluminium or stainless steel clips.
- 720 STANDING SEAM FIXED CLIPS:
- Aluminium clips: Cut from same alloy and thickness of metal as that being secured.
 - Stainless steel (austenitic) clips: Cut from same thickness of metal as the aluminium being secured.

- Dimensions:
 - Width: Not less than 50 mm.
 - Base length: Not less than 20 mm.
 - Upstand: To suit standing seam profile.
 - Fixing: Secure each clip to substrate with two fixings.
- 725 STANDING SEAM SLIDING CLIPS:
- Aluminium clips: Cut from same alloy and thickness of metal as that being secured.
 - Stainless steel (austenitic) clips: Cut from same thickness of metal as the aluminium being secured.
 - Dimensions:
 - Fixed component:
 - Width: Not less than 90 mm.
 - Base length: Not less than 20 mm.
 - Upstand: 20 mm, with slot for locating sliding component.
 - Sliding component:
 - Width: Not less than 35 mm.
 - Upstand: To suit standing seam profile.
 - Fixing: Secure each clip to substrate with three fixings.
- 730 BATTEN ROLL CLIPS:
- Material: Cut from same alloy and thickness of metal as that being secured.
 - Dimensions:
 - Width: Not less than 50 mm.
 - Length: Sufficient to pass under batten and turn up each side, with not less than 20 mm projection for folding into welt.
 - Fixing: Secure each clip to substrate with one fixing.
- 750 CLIPS FOR FLASHINGS/ CROSS JOINTS:
- Material: Cut from same alloy and thickness as that being secured.
 - Dimensions:
 - Width: Not less than 50 mm.
 - Length: Sufficient to suit detail.
 - Fixing: Secure each clip to substrate with two fixings, not more than 50 mm from edge of strip/ sheet being fixed.
- 760 CONTINUOUS CLIPS:
- Material: Cut from same alloy and thickness as that being secured.
 - Dimensions:
 - Width: Sufficient to suit detail.
 - Length: Not more than 1.8 m.
 - Fixing: To substrate at 150 mm centres. Welt edge of strip/ sheet being fixed to continuous clip and dress down.
- 770 WEDGE FIXING INTO JOINTS/ CHASES:
- Joint/ chase: Rake out to a depth of not less than 25 mm.
 - Aluminium: Fold 25 mm into joint/ chase with a waterstop welted end.
 - Fixing: Aluminium wedges at not more than 450 mm centres, at every change of direction, and with at least two for each piece of aluminium.
 - Sealant: _____.
 - Application: As section Z22.
- 780 WEDGE FIXING INTO DAMP PROOF COURSE JOINTS:
- Joint: Rake/ cut out under damp proof course to a depth of not less than 25 mm.
 - Aluminium: Fold 25 mm into joint with a waterstop welted end.
 - Fixing: Aluminium wedges at not more than 450 mm centres, at every change of direction, and with at least two for each piece of aluminium.
 - Sealant: _____.
 - Application: As section Z22.

- 790 SCREW FIXING INTO JOINTS/ CHASES:
- Joint/ chase: Rake out to a depth of not less than 25 mm.
 - Aluminium: Fold into joint/ chase and up back face.
 - Fixing: Into back face with sherardized, zinc plated steel or aluminium screws, washers and plastics plugs at not more than 450 mm centres, at every change of direction, and with at least two fixings for each piece of aluminium.
 - Sealant: _____.
 - Application: As section Z22.

JOINTING

- 815 FREE EDGE DETAILS:
- Visible feature edges: Finish with _____
- 830 STANDING SEAM JOINTS:
- Joint allowances: 45 mm overlap, 35 mm underlap and 5 mm gap for thermal movement. Preformed interlocking profiles for overlap and underlap are permitted.
 - Clip positions:
 - Fixed clips (clause 720) _____
 - Sliding clips (clause 725) _____
 - Forming: Double welt overlap and clips around underlap to form standing seam 25 mm high of consistent cross section.
- 840 BATTEN ROLL JOINTS:
- Core: Timber as clause 640.
 - Size: Not less than 40 mm high x 40 mm wide tapering to 36 mm at apex.
 - Fixings to substrate: Sherardized or zinc plated steel, or aluminium countersunk screws at not more than 600 mm centres.
 - Aluminium covering:
 - Joint allowances: Form strips/ sheets each side of core with 5 mm gap for thermal movement and upstands to 10 mm above height of core.
 - Fixing: Clips (clause 730) _____
- Over upstands: Welt clips.
 - To cappings: Single lock welt upstands.
 - Cappings: Aluminium of the same alloy, finish and thickness of metal as the strip/ sheet being jointed, in lengths not more than 1.25 m, with single lock welt end to end joints.
- 860 DRIP/ STEP JOINTS:
- Strip/ sheet from below step: Fold up full height of upstand and fix to top edge.
 - Form aluminium underlap/ continuous clip:
 - Cover to roof slope: Not less than 100 mm with anticapillary welt at top edge.
 - Projection: 25 mm for forming into drip welt.
 - Downstand: Not less than 40 mm with welt at bottom edge.
 - Fixing: To roof slope at 100 mm centres, avoiding through fixings at longitudinal joint positions.
 - Strip/ sheet from above step: Fold around underlap projection and single welt to form a drip.
- 880 SINGLE LOCK WELT JOINTS:
- Joint allowances: 100 mm overlap and 50 mm underlap.
 - Underlap: Welt and secure with clips (clause 750) two per bay.
 - Overlap: Welt around underlap and clips and dress down.
 - Forming: Fold welts lightly to allow freedom of movement.
- 890 DOUBLE LOCK WELT JOINTS:
- Joint allowances: 90 mm overlap, 60 mm underlap.
 - Underlap: Welt and secure with clips (clause 750) one per bay.
 - Overlap: Double welt around underlap and clips, and dress down.

