

H43 METAL COMPOSITE PANEL CLADDING/ COVERING

To be read with Preliminaries/General conditions.

120 COMPOSITE METAL ROOF DECKING SYSTEM

ADMASTER COMPOSITE DECKING SYSTEM.

Composite deck for use under fully supported or self supported roofing systems. Panels provide an economic 'fast track' solution to insulate, vapour control, temporary weathering & safe working platform.

- **Drawing reference(s)** _____
- **Supports:** Steel purlins, timber.
- **Pitch:** As detailed on drawings
- **Panels: Manufacturer**
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Manchester. M11 4QU. Tel: 01612310001 Fax: 01612311055
- **Product reference:** Admaster Composite Decking System.
- **External facing material:** Hot dipped galvanised steel (Thickness 0.65mm)
- **External finish facing material:** Grey Primer with either Plastisol, Polyester or PVDF.
- **External facing colour:** Standard colour range.
- **External Profile:** Flat or Shallow (57mm x 2mm)
- **Internal facing material:** Hot dipped galvanised steel (Thickness 0.55mm)
- **Internal finish facing material:** Grey primer with acrylic, phenolic resin based polyester enamel lining.
- **Internal facing colour:** Off white.
- **Internal Profile:** Shallow (57mm x 2mm)
- **Core insulating material:** LPCB HCFC free,
PIR; polyisocyanurate.
Rockwool
- **Panel thickness:** 60mm, 80mm & 100mm
- **Panel width:** 1100mm
- **Panel length:** up to 13500mm
- **Accessories:** All fittings and accessories necessary to complete the Installation in accordance with the drawings and the manufacturers recommendations.
- **Primary fixings:** Refer to Advanced Cladding & Insulation Group Ltd. For recommended fixings.
- **Special features:**
- **Joint Type:** Admaster SC Joint.
- **Sealant:** Refer to Advanced Cladding & Insulation Group Ltd. for Recommended sealants.
- **'U' Values:** Refer to Admaster Data Sheet.

H43 METAL COMPOSITE PANEL CLADDING/ COVERING

GENERAL REQUIREMENTS

170 DESIGN:

Complete the design of the cladding system on accordance with BS 5427:Part 1 and the requirements of this specification.
Co-ordinate detailed design with that of all related works.
Submit detailed design proposals to the CA before commencing any cladding fabrication work.

DESIGN/PERFORMANCE REQUIREMENTS

180 GENERALLY.

Requirements specified in this section, unless indicated otherwise, apply to the whole cladding system including incorporated plastics cladding, flashings and abutments. Full allowance must be made for deflections and other forms of movement.

185A VERIFICATION OF PERFORMANCE:

Before commencing fabrication of any part of the cladding submit evidence and calculations demonstrating compliance of the following with performance requirements:

.....

.....

Fastenings

187A DEFLECTION OF METAL CLADDING:

Maximum permitted roof cladding deflection under distributed loads as a multiple of span and due to:

Dead Load: $L/500$

Dead and imposed load: $L/200$

Dead and wind (net uplift) load: $L/150$

Maximum permitted wall cladding deflection limits under distributed loads as a multiple of span and due to dead and winds:...

195A INTEGRITY OF CLADDING:

Determine....., the size(s), number and spacing of fixings, and Incorporation of accessories and fittings to ensure the cladding system will resist all factored dead, imposed and design live loads, and accommodate all deflections and thermal movements without damage in accordance with BS 5427: Part 1.

Calculate wind loads on roof and wall cladding appropriate to location, exposure, roof height, building shape and size in accordance with BS 6399: Part 2 Standard Method and BS 5427: Part 1.

Basic wind speed (V_b):.... m/s

Altitude factor (S_a):....

Direction factor (S_d):....

Seasonal factor (S_s): 1

Probability factor (S_p): 1

Terrain and building factor (S_b):....

External size effect factors (C_a): 1

Internal size effect factors (C_a):....

External pressure coefficients (C_{pe}): As determined from BS 6399: Part 2, clauses 2.4 and 2.5.

Internal pressure coefficients (C_{pe}): As determined from BS6399: Part 2, clause 2.6.

H43 METAL COMPOSITE PANEL CLADDING/ COVERING

Dominant opening:.....

Determine imposed roof load (no access) in accordance with BS6399: Part 3 and BS5427: Part 1.

Permanent specific imposed roof loads:.....

Temporary imposed roof loads:.....

196A INTEGRITY OF CLADDING:

Determine....., the size(s), number and spacing of fixings, and incorporation of accessories and fittings to ensure the cladding system will resist all factored dead, imposed and design live loads, and accommodate all deflections and thermal movements without damage in accordance with BS 5427: Part 1.

Calculate wind loads on roof and wall cladding appropriate to location, exposure, roof height, building shape and size in accordance with BS 6309: Part 2 Standard Method and BS 5427: Part 1.

Determine imposed roof load (no access) in accordance with BS 6399: Part 3 and BS5427: Part1.

Permanent specific imposed roof loads:..... Temporary imposed roof loads:.....

198 WATER PENETRATION

Onto internal surfaces, or into cavities not designed to be wetted, must not occur under site exposure conditions.

FIXING CLADDING

210 STRUCTURE:

Check that structure is in a suitable state to receive cladding before commencing fixing. Subcontractor must confirm acceptance to Main Contractor and CA.

215 STRUCTURE:

Do not fix cladding until final coats of paint have been applied to outer surfaces of supporting structure.

216B PROTECTION:

Store packs/sheets/panels as recommended by the cladding manufacturer. Store packs on the ground with a slight slope along the pack, on timber bearers not more than two metres apart, with at least 100mm between the ground and the underside of the pack. Provide spacing battens on the lines of the bearers between each level of packs and do not stack packs more than three packs high.

Where packs are to remain outside for long periods of time, provide weather proof covers, but ensure free circulation of air around the packs.

When a pack is placed on the roof:

- Check that the supporting structure is of adequate strength to support the weight of the pack.
- Unless otherwise agreed, locate the pack immediately above a rafter, with not more than one pack to each rafter.
- Ensure that the weight of the pack is evenly distributed over all the purlins and that the ends of the pack do not overhang.
- Lash the pack to the structure to prevent slippage and uplift.

H43 METAL COMPOSITE PANEL CLADDING/ COVERING

217B HANDLING:

Handle packs/sheets/panels as recommended by the cladding Manufacturer.

When lifting packs by mechanical means, protect the sheets/panels from damage.

- Obtain the agreement of the cladding manufacturer before lifting packs using fork-lifts.
- Do not use fork-lifts for packs more than six metres long, provide suitable protection between the forks and the underside of the packs and ensure that the forks are at least one metre apart.
- Position slings beneath pack bearers and provide strong backs at top and bottom of packs at sling positions.
- Use lifting beams with the number of slings recommended by the cladding manufacturer.
- Land packs gently and evenly on the bearing surfaces to avoid impact damage.

When handling a panel:

- Grip the composite section of the panel.
- Lift the panel from the pack without dragging on the panel below.
- Carry the panel on edge.

219 FASTENINGS GENERALLY:

Type(s), size(s), materials and finishes as specified, or in the absence of such specification, as recommended for the purpose by cladding manufacturer.

221A FITTINGS AND ACCESSORIES GENERALLY:

Cappings, closure pieces, flashings, trims, sills, gutters, fillers, spacers, tapes, sealants, fixings, etc., to be obtained from the cladding manufacturer, unless otherwise specified or agreed.

271A INFILL MINERAL WOOL INSULATION:

Mineral fibre to BS 3958: Part 5

Install as the work proceeds, ensuring all edges are close butt jointed to achieve continuity between ends of insulation, leaving no gaps. Secure to prevent future movement or dislodgment. Ensure insulation is not compressed. Keep dry.

272A INFILL RIGID INSULATION:

Manufacturer and reference: Admaster Strip

Material: Rigid urethane

Size/shape: To suit details

Install as the work proceeds, ensuring all edges are close butt jointed to achieve continuity between ends of panels, leaving no gaps. Secure to prevent future movement or dislodgement. Keep dry.

Fully bond contact faces with panel membrane and membrane flashings.

273A GUN APPLIED FOAM FOR SEALING JOINTS IN INSULATION:

Manufacturer and reference.....

Apply in accordance with the manufacturers instructions to fill any voids between the butted ends of insulation.

274A GUN APPLIED FOAM FOR FILLING VOIDS:

Manufacturer and reference:.....

Apply in accordance with the manufacturers instructions to fill any voids

H43 METAL COMPOSITE PANEL CLADDING/ COVERING

274A GUN APPLIED FOAM FOR FILLING VOIDS:

Manufacturer and reference:.....

Apply in accordance with the manufacturers instructions to fill any voids between panel ends and at upstands etc.

275A PREBONDED INSULATION:

Only cut back or debond the insulation where agreed by the CA, for the minimum necessary to a clean line, ensuring there are no gaps in insulation after fixing.

352A CUTTING OF SHEETS AND ACCESSORIES:

Keep site cutting to a minimum by having sheets cut accurately to length in the weeks.

Do not cut sheets and accessories with an abrasive wheel or by burning.

Cut sheets and accessories with fine toothed reciprocating saw.

On completion of cut, immediately check organic coatings for damage, make good as necessary as clause 452A.....

354A PROTECTION TO ENDS OF SHEETS AND ACCESSORIES:

Paint the following to provide additional protection against corrosion:

~.....

Manufacturer and reference of coating

Material:.....

410A FIXING SHEETS/PANELS GENERALLY:

Cut sheets and flashings to give clean, true lines with no distortion. Remove burrs and any lubricant.

Cut openings in sheets for outlets, vent pipes, flues, etc. to the minimum size necessary. Reinforce edges of openings as specified, or in the absence of such specification, as recommended by the cladding manufacturer.

Use sheets in the locations for which they have been prepared.

Set out the first laid sheets/panels true to the building line and regularly check the module and sheet/ panel line during laying.

Ensure that ends of sheets and end laps are fully supported.

Drill all holes and install all fasteners perpendicular to the surface of the cladding. Position fixings as detailed, at regular intervals in straight lines. Holes for primary fastenings for steel and aluminium sheets to be 1.5mm larger than diameter of fastener unless self-drilling type with pilot point is used.

Locate fasteners that are within oversized holes centrally within the hole. Remove all drilling swarf, dust and any other foreign matter before finally fixing sheets or accessories into position.

Protect sheets adequately during, fixing and up to Practical Completion against mechanical damage, and disfigurement. Rectify any defects in an approved manner and as quickly as practicable to minimise damage and nuisance.

Install fasteners to the correct tightness, using any special tools recommended by the fastener manufacturer. Ensure that the correct drilling speeds are used, that the fastening threads are not stripped, and that the fastenings are watertight and the sheeting is secure but not buckled or distorted.

Apply seals as specified, or in the absence of such specification, as recommended by the cladding manufacturer.

Check all visible fasteners on completion and adjust as necessary.

H43 METAL COMPOSITE PANEL CLADDING/ COVERING

452A MAKING GOOD DAMAGE TO ORGANIC FINISHES:

Replace any panels/accessories where the finish has been badly damaged. Obtain the approval of CA before touching up minor abrasions and scratches that have not penetrated through the organic coating. Where damage has penetrated through the organic coating, remove rust and any loose coating and clean prime and paint the damaged area in accordance with the paint manufacturers recommendations. Restrict the area of patching to a minimum, using an artists medium to fine brush where necessary. Manufacturer and reference:....

STRUCTURAL MOVEMENT JOINTS:

Leave space between sheets to coincide with structural movement joints. Fix movement joint cover to sheets on one side only.

550B SEALING LAPS IN SHEETS:

Sealed with Self Adhesive Aluminium Foil Tape.

552A SEALING ROOF TO WALL CLADDING:

Complete the internal air seals at the perimeter by sealing the roof and wall cladding to the supporting member. Seal butt joints in the supporting members to the approval of the CA.

560A WARNING NOTICES:

Signs as described below to be fixed at points indicated on drawings. Manufacturer and reference.....
Material:
Description:
Warning sign as BS 5378: Part 3 reference A.2.4 with supplementary text sign, lettering 'DANGER', Fragile roof lights.

COMPLETION:

Ensure that:
Roof areas are left clean with all outlets clear.
All work by others necessary to provide a weathertight finish is satisfactorily completed.
Defects are repaired without delay to minimise damage and nuisance.



Admaster Composite Decking System

To be read in conjunction with preliminaries/general conditions.

This guide has been prepared to illustrate a typical implementation of the Admaster Composite Decking System (CDS). Installation contractors will have to customise these guidelines to suit the particular constraints of each project. Where (for example) support structure details, access and working areas may differ.

Whilst it is the individual contractors responsibility to apply these installation principles to specific projects, additional information can be obtained from Advanced Cladding & Insulation Group Ltd. Technical department.

A. INSTALLATION

1. Handling

Always "lift" panels from a pack, never drag. Never lift the panel by the top sheet in isolation.

2. Commencing Operations

On commencement of laying operations, normal good cladding practices should prevail. Care should be taken to avoid undue rough handling to ensure surface damage is avoided.

As each individual panel is removed from the pack, the male and female edges should be visually examined and any slight overspill of insulation should be carefully removed.

The first panel to be installed would normally be laid adjacent to the gable verge or the building corner. This will ensure natural side lapping of the next panel. It is important that the first tier of panels are laid true to line, preferably properly lined with a string line/laser to ensure a true and neat line. Unlike single skin cladding, composite panels cannot easily be manipulated to correct excessive growth and shrinkage, there it is advisable to frequently check for run and line of sheets.

B. MAIN ROOF PANEL FASTENERS

1. Fasteners

For roof applications, appropriate fixings should be used where applicable.

2. Fastener Intensity

The intensity of fixing depends on many parameters, for example wind uplift, purlin spacing and purlin thickness etc. Information may be obtained from our Technical department.

C. FIXING OF PANELS

It should be noted that walking on Admaster Composite Decking system is prohibited until they have been through fixed at least once per purlin.

1. Fully Supported (FS) System

A breather membrane should be laid over the Admaster (CDS) prior to attaching the fully supported roofing system, by means of clips, or other such devices, designed and supplied by the manufacturer of the system. The same manufacturer should also advise as to the number of fasteners devices required for any given loading condition. It is recommended that the clips are fixed to the 0.65mm thick external skin of the Admaster (CDS) by means of fasteners supplied by the manufacturer of the System these being carbon steel, self drilling screws, with low profile head and Climaseal protection and zinc plating. No more than two fixings should be used at any one clip, bracket, or fastening device.

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2. Self Supported (SS) System

A breather membrane should be laid over the Admaster (CDS) prior to attaching the self supporting roofing system. The systems are anchored to the purlins by screws which pass through the Admaster (CDS), and are to be of a type specified by the manufacturer of the Self Supported System and in sufficient quantity to resist the design uplift loading. It should be noted that if the system is of the type which requires clips or brackets for mounting, it is the designer's responsibility to ensure that the point loading created as a result of this does not affect the performance of the Admaster (CDS) adversely.

D. Joint Sealing

1. Sealing Tape

All Admaster (CDS) panels are supplied with an integral side seal gasket which creates a technically sound joint and a temporary weather barrier, however it is necessary to seal all side and end joints on the external face using a 50mm wide self adhesive aluminium foil tape.

2. Application

All sealant tapes are to be carefully applied to the manufacturers recommendations. All sealant tape should be applied to dry surfaces' i.e. wiped, or blown dry if necessary.

3. Butt Jointing

Butt jointing of the sealing tapes must not occur. At the stop & start positions the sealant tape should lap one another by at least 25mm. Care should be taken at cross-over position of the tapes to ensure that the seals are fully effective.

E. Site Cutting and Trimming

1. General

When site cutting, trimming and notching of the Admaster (CDS) is required, it is to be carried out in a good and proper workmanlike

manner using reciprocating type saws for longitudinal cuts. Note: Silicone carbide, aluminium oxide or Carborundum cutting discs are not recommended. The panels are to be firmly and properly supported at the point of cutting. The prepainted colour coating should be protected against scratches and abrasions etc., whilst making the cuts.

It is very important that after any cutting, the panels are immediately cleaned down of swarf and dirt particles.

It is recommended that all cut ends and edges be treated with edge protection lacquer by the contractor prior to installation.

F. Completion

1. On Completion of Works

On completion of the cladding operations or sectional handover, the fixer and or his supervisor should:

a. Check that all fasteners etc, have been installed correctly and are incorporated in Accordance with the requirements.

b. Check all fasteners are in a neat and regular pattern.

c. Check that all sealant tape has been correctly installed.

e. Check that all minor surface abrasions have been touched up and left in a satisfactory manner.

f. Check that the surface is clean and tidy prior to any other works being applied on top of the Admaster (CDS).

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