163103 - MRI Observation Ward

OBSERVATION WARD SPECIFICATION - CONSTRUCTION ISSUE

15 August 2017

This document includes:

Code	Section	Revision	Dated
C10	Site survey	T1	25 Aug 2016
C20	Demolition	T1	25 Aug 2016
K10	Plasterboard dry linings/ partitions/ ceilings	T5	15 Aug 2017
K11	Rigid sheet flooring/ sheathing/ decking/ sarking/ linings/ casings	T1	25 Aug 2016
K32	Panel cubicles/ duct and wall linings/ screens	T1	22 Sep 2016
K40	Demountable suspended ceilings	T1	20 Jul 2016
L10	Windows/ Rooflights/ Screens/ Louvres	T1	22 Sep 2016
L20	Doors/ shutters/ hatches	T1	23 Sep 2016
L30	Stairs/ ladders/ walkways/ handrails/ balustrades	T1	25 Aug 2016
L40	General glazing	T1	22 Sep 2016
M10	Cement based levelling/ wearing screeds	T1	23 Sep 2016
M50	Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting	T1	23 Sep 2016
M52	Decorative papers/ fabrics	T1	22 Sep 2016
M60	Painting/clear finishing	T1	22 Sep 2016
N10	General fixtures/ furnishings/ equipment	T1	22 Sep 2016
N13	Sanitary appliances and fittings	T2	15 Dec 2016
N15	Internal fire and safety signage systems	T1	23 Aug 2016
P12	Fire stopping systems	T1	7 Sep 2016
P20	Unframed isolated trims/ skirtings/ sundry items	T4	11 Aug 2017
P21	Door/ window ironmongery	T1	8 Sep 2016
P31	Holes, chases, covers and supports for services	T1	22 Sep 2016
R11	Above ground foul drainage systems	T1	23 Sep 2016
Z10	Purpose made joinery	T1	11 Aug 2016
Z11	Purpose made metalwork	T1	11 Aug 2016
Z12	Preservative/ fire retardant treatment	T1	11 Aug 2016
Z20	Fixings and adhesives	T1	11 Aug 2016
Z21	Mortars	T1	11 Aug 2016
Z22	Sealants	T1	25 Aug 2016

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C
Demolition/ Alteration/ Renovation

C10
Site survey

C10 Site survey

To be read with Preliminaries/ General conditions.

SURVEYS

115 PRELIMINARY SURVEY REQUIRED FOLLOWING INTERNAL DEMOLITION COMPLETION

- Qualifications of survey author:
  Allow one day survey by design team following internal strip out including all partitions, ceilings, IPS and service/column boxings/casings
  Area to be vacant of all derbris allowing safe access all areas.
- Area to be surveyed: Internal ward area of works.
- Objectives:
  - Visible or suspected hazards: Record general positions/ forms of visible/ suspected hazards, including Unknow materials.
  - Designation of areas within/ adjacent to site: Record boundaries/ type of designation within, or adjacent to, the site, including None.
  - Protected habitats/ species outside designated areas: Record general positions of sightings or evidence of species including None.
- Methodology:
  - Specific requirements: Do not use intrusive survey techniques. Avoid disturbing natural features or wildlife.
  - Permissible survey techniques: Visual and measured.
- Reference data: The following information is provided:
  Drawing updates as required by design team.
- Preliminary survey report: Submit.
  - Timing: Prior to new construction works commencing.

SURVEY TECHNIQUES

210A ACCESS EQUIPMENT

- General: Provide safe access equipment and personnel to operate as necessary to assist deisgn team in completing the survey

C20
Demolition

C20 Demolition

To be read with Preliminaries/General conditions

GENERAL REQUIREMENTS

110 DESK STUDY/ SURVEY

- Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:
  - the structure or structures to be deconstructed/ demolished,
  - the site on which the structure or structures stand, and
  - the surrounding area.
- Report and method statements: Submit, describing:
  - Form, condition and details of the structure or structures, the site, and the surrounding area.
    Extent:
    To area covered on external survey including adjacent courtyards
    Basement area and crawlways
    Roof Area of works internally and all rooms and circulaiton spaces adjoining .
  - Type, location and condition of features of historical, archaeological, geological or ecological importance.
  - Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures, or by noise, vibration and/ or dust generated during deconstruction/ demolition.
  - Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
  - Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.
  - Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.
  - Proposed programme of work, including sequence and methods of deconstruction/ demolition.
  - Details of specific pre-weakening required.
  - Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
  - Arrangements for control of site transport and traffic.
  - Special requirements: Disposal methods for gypsum-based products and Site waste management plan development and proposals .
- Format of report: PDF .

120 EXTENT OF DECONSTRUCTION/ DEMOLITION

- General: Subject to retention requirements specified elsewhere, deconstruct/ demolish structures down to
  Upper level of ground floor slab
  Lower level of any ground floor screed .

130 GROUNDWORKS

- Old foundations, slabs and the like: Break out in locations and to the extents stated.
- Contaminated material: Remove, and carry out remediation required by the Enforcing Authority.

140 BENCH MARKS

- Unrecorded bench marks and other survey information: Give notice when found. Do not remove marks or destroy the fabric on which they are found.

150 FEATURES TO BE RETAINED

- General: Keep in place and protect the following:
  - Boundary walls;
  - Gates and gate pillars; and
  - Railings.

SERVICES AFFECTED BY DECONSTRUCTION/ DEMOLITION

210 SERVICES REGULATIONS

- Work carried out to or affecting new and/ or existing services: Carry out in accordance with the byelaws and/ or regulations of the relevant Statutory Authority.

220A LOCATION OF SERVICES

- Services affected by deconstruction/ demolition work: Locate and mark positions.
- Mains services marking: Arrange with the appropriate authorities for services to be located and marked.
  - Marking standard: In accordance with National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.
- REPORT ANY UNKNOWN SERVICES MISSING FROM DRAWINGS TO REDWORTHS FOR CONFIRMATION OF ACTION REQUIRED

230 SERVICES DISCONNECTION ARRANGED BY CONTRACTOR

- General: Arrange with the appropriate authorities for disconnection of services and removal of fittings and equipment owned by those authorities prior to starting deconstruction/ demolition.

231 SERVICES DISCONNECTION ARRANGED BY EMPLOYER

- General: The Employer will arrange with the appropriate authorities for disconnection of services and removal of fittings and equipment owned by those authorities prior to deconstruction/ demolition, as follows:
  REPORT ANY UNKNOWN SERVICES MISSING FROM DRAWINGS TO REDWORTHS FOR CONFIRMATION OF ACTION REQUIRED.
- Timing: Do not start deconstruction/ demolition until disconnections are completed.

240A DISCONNECTION OF DRAINS

- General: Locate, disconnect and seal disused foul and surface water drains.
- Sealing: Permanent, and within the site.
- REPORT ANY UNKNOWN DRAINS MISSING FROM DRAWINGS TO SHARP AND SCARFFE FOR CONFIRMATION OF ACTION REQUIRED

250A LIVE FOUL AND SURFACE WATER DRAINS

- Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings:
  - Protect; maintain normal flow during deconstruction/ demolition.
  - Make good any damage arising from deconstruction/ demolition work.
  - Leave clean and in working order at completion of deconstruction/ demolition work.
- REPORT ANY UNKNOWN DRAINS MISSING FROM DRAWINGS TO SHARP AND SCARFFE FOR CONFIRMATION OF ACTION REQUIRED

260A SERVICE BYPASS CONNECTIONS

- Refer Redworths specifications and Employers requirements

DECONSTRUCTION/ DEMOLITION WORK

310 WORKMANSHIP
- Standard: Demolish structures in accordance with BS 6187.
- Operatives:
  - Appropriately skilled and experienced for the type of work.
  - Holding, or in training to obtain, relevant CITB Certificates of Competence.
- Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

320 GAS OR VAPOUR RISKS
- Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.

330 DUST CONTROL
- General: Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.
- Lead dust: Submit method statement for control, containment and clean-up regimes.

340 HEALTH HAZARDS
- Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

350 ADJOINING PROPERTY
- Temporary support and protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.
- Defects: Report immediately on discovery.
- Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.
- Support to foundations: Do not disturb.

360 STRUCTURES TO BE RETAINED
- Extent:
  All existing external walls excluding dry linings
  Existing slabs and screeds
  Existing drainage drops not included for strip out as Sharp and Scarrfe/ Redworths drawings.
- Parts which are to be kept in place: Protect.
- Interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimize making good.

370 PARTLY DEMOLISHED STRUCTURES
- General: Leave in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.
- Temporary works: Prevent overloading due to debris.
- Access: Prevent access by unauthorized persons.

380 DANGEROUS OPENINGS
- General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
- Access: Prevent access by unauthorized persons.

390A ASBESTOS-CONTAINING MATERIALS – KNOWN OCCURRENCES
- Refer to Register and/or reports provided by Client

391 ASBESTOS-CONTAINING MATERIALS – UNKNOWN OCCURRENCES

- Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
- Removal: Submit statutory risk assessments and details of proposed methods for safe removal.

410 UNFORESEEN HAZARDS

- Discovery: Give notice immediately when hazards such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.
- Removal: Submit details of proposed methods for filling, removal, etc.

442A SITE SURFACE AT COMPLETION

- Levels: All to match existing

450A SITE CONDITION AT COMPLETION

- Debris: Clear away and leave the site in a tidy condition.
- Other requirements: All pavings/kerbs/ haunchings / soft landscape reinstated to match existing at compleiton of any external works to drainage and services

MATERIALS ARISING

510 CONTRACTOR'S PROPERTY

- Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided.
- Action: Remove from site as work proceeds where not to be reused or recycled for site use.

511 EMPLOYER'S PROPERTY

- Components and materials to remain the property of the Employer:
  List to be agreed prior to strat on site. Allow removal and handing to client for storage .
- Protection: Maintain until these items are removed by the Employer or reused in the Works, or until the end of the Contract.
- Special requirements: None.

520 RECYCLED MATERIALS

- Materials arising from deconstruction/ demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.
- Evidence of compliance: Submit full details and supporting documentation.
  - Verification: Allow adequate time in programme for verification of compliance.

K
Linings/Sheathing/Dry partitioning

K10
Plasterboard dry linings/ partitions/ ceilings

K10 Plasterboard dry linings/ partitions/ ceilings

To be read with Preliminaries/ General conditions.

TYPES OF DRY LINING

127A METAL STUD PARTITION - WALL TYPE A

Name of project: Manchester Royal Infirmary
Drawing reference(s): _____AFL-XX-GF-DR-A-22401____
Manufacturer: British Gypsum, East Leake, Loughborough, Leicestershire LE12 6HX
Website: www.british-gypsum.com, Tel: 0115 945 6123,E-Mail: bgtechnical.enquiries@bpb.com.
British Gypsum contact: Alasdair Bell
Product reference: GypWall CLASSIC.
Nominal thickness (excluding finishes): 122mm.
Performance criteria:
Fire resistance to BS EN 1364-1: 60 minutes Estimated.
Sound insulation: Rw 58 dB Estimated.
Partition duty to BS 5234: Parts 1 and 2: Severe.
Maximum height based on limiting deflection of L/240 at 200Pa: 4700mm.
Timber sole plate: 38mm (nominal) x channel width, if required.
Framing:
Studs: Gypframe 70 AS 50 AcouStud at 600mm centres and Gypframe 70 S 50 at abutments, openings and junctions.
Stud boxing: n/a.
Floor channel: Gypframe 72 FEC 50 (height up to 4200mm), 72 DC 60 (heights up to 8000mm), 72 EDC 80 (heights over 8000mm).
Head channel: As floor channel or as determined by deflection criteria.
Fixing T: Gypframe GFT1 to support horizontal joints of single layer board linings.
Fixing strap: Gypframe GFS1 to support horizontal joints in face layer of double layer board linings, or as an alternative to fixing T for single layer board linings.
Head condition: Suitably fixed up to structural soffit.
Deflection allowance: To be determined by a Structural Engineer. 25mm TBC by Structural Engineer
Lining: Inner layer 12.5mm Gyproc SoundBloc, sheet width 1200mm; outer layer 12.5mm Gyproc Habito, sheet width 1200mm; to both sides of framing.
Screws: 25mm British Gypsum Drywall Screws & 35mm British Gypsum High Performance Screws.
Cavity insulation: 50mm Isover Acoustic Partition Roll (APR 1200).
Recycled content: n/a.
Gyproc Sealant: As clause 516A.
Finishing: Taped seamless finish as clause 671A.
Accessories: Gyproc Profilex access panels as clause 531A – if required.
Other requirements: PATRESSES MAY BE REQUIRED TO STRENGTHEN AREAS WHERE ANY LIVE LOADS ARE

Habito board in partitions and linings. No 10 wood screws are only recommended fixings and holes not to be pre-drilled.
15Kg pull out load per screw provided fixings as British Gypsum specifications provided.
For live loads to grab rails, handrails etc additional pattresses/ timber framing tied to British Gypsum studs is required

Gyproc Aquabead to be installed at external corners of the partitions for increased dura
Gyproc Aquabead to be installed at external corners of the partitions for increased durability and quality of finish.
Please Note: Before altering this specification check with the design team that any proposed changes will not jeopardise the project environmental assessment rating target (BREEAM, CfSH, LEED, etc.)
Please Note: Before altering an ACTIVair specification check with the design team that

any proposed changes will not jeopardise the project's indoor air quality performance or air quality management plan.

Please always refer to current literature by visiting www.british-gypsum.com

127B METAL STUD PARTITION - WALL TYPE B

Name of project: Manchester Royal Infirmary
Drawing reference(s): ____AFL-XX-GF-DR-A-22401_____
Manufacturer: British Gypsum, East Leake, Loughborough, Leicestershire LE12 6HX
Website: www.british-gypsum.com, Tel: 0115 945 6123,E-Mail: bgtechnical.enquiries@bpb.com.
British Gypsum contact: Alasdair Bell
Product reference: GypWall CLASSIC.
Nominal thickness (excluding finishes): 122mm.
Performance criteria:
Fire resistance to BS EN 1364-1: 90 minutes.
Sound insulation: Rw 49 dB Estimated.
Partition duty to BS 5234: Parts 1 and 2: Severe.
Maximum height based on limiting deflection of L/240 at 200Pa: 4600mm.
Timber sole plate: 38mm (nominal) x channel width, if required.
Framing:
Studs: Gypframe 70 S 50 at 600mm centres and Gypframe 70 S 50 at abutments, openings and junctions.
Stud boxing: n/a.
Floor channel: Gypframe 72 FEC 50 (height up to 4200mm), 72 DC 60 (heights up to 8000mm), 72 EDC 80 (heights over 8000mm).
Head channel: As floor channel or as determined by deflection criteria.
Fixing T: Gypframe GFT1 to support horizontal joints of single layer board linings.
Fixing strap: Gypframe GFS1 to support horizontal joints in face layer of double layer board linings, or as an alternative to fixing T for single layer board linings.
Head condition: Suitably fixed up to structural soffit.
Deflection allowance: To be determined by a Structural Engineer. 25mm TBC BY Structural Engineer
Lining: Inner layer 12.5mm Gyproc SoundBloc, sheet width 1200mm; outer layer 12.5mm Gyproc Habito, sheet width 1200mm; to both sides of framing.
Screws: 25mm British Gypsum Drywall Screws & 35mm British Gypsum High Performance Screws.
Cavity insulation: n/a.
Recycled content: n/a.
Gyproc Sealant: As clause 516A.
Finishing: Taped seamless finish as clause 671A.
Accessories: Gyproc Profilex access panels as clause 531A – if required.
Other requirements: PATRESSES MAY BE REQUIRED TO STRENGTHEN AREAS WHERE ANY LIVE LOADS ARE

Habito board in partitions and linings. No 10 wood screws are only recommended fixings and holes not to be pre-drilled.
15Kg pull out load per screw provided fixings as British Gypsum specifications provided.
For live loads to grab rails, handrails etc additional pattresses/ timber framing tied to British Gypsum studs is required

Gyproc Aquabead to be installed at external corners of the partitions for increased durability and quality of finish.
Please Note: Before altering this specification check with the design team that any proposed changes will not jeopardise the project environmental assessment rating target (BREEAM, CfSH, LEED, etc.)
Please Note: Before altering an ACTIVair specification check with the design team that any proposed changes will not jeopardise the project's indoor air quality performance or air quality management plan.
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127C METAL STUD PARTITION - WALL TYPE C

Name of project: Manchester Royal Infirmary
Drawing reference(s): ____AFL-XX-GF-DR-A-22401_____
Manufacturer: British Gypsum, East Leake, Loughborough, Leicestershire LE12 6HX
Website: www.british-gypsum.com, Tel: 0115 945 6123,E-Mail: bgtechnical.enquiries@bpb.com.
British Gypsum contact: Alasdair Bell
Product reference: ShaftWall.
Nominal thickness (excluding finishes): 97mm.
Performance criteria:
Fire resistance to BS 476: Part 22: (shaft to room) 90 mins Integrity, 90 mins Insulation. (room to shaft) 90 mins Integrity, 60 mins Insulation.
Sound insulation: Rw 40 dB Estimated.
Partition duty to BS 5234: Parts 1 and 2: Severe.
Maximum height based on limiting deflection of L/240 at 200Pa: 4400mm.
Framing:
Studs: Gypframe 70 I 70 at 600mm centres.
Floor channel: Gypframe 72 FEC 50 (height up to 4200mm), Gypframe 72 DC 60 (heights over 4200-8000mm).
Head/opening channel: Gypframe 72 EDC 80.
Abutment channel: Gypframe 70 SC 70.
Retaining channel: Gypframe G110.
Fixing T: Gypframe GFT1 to support horizontal board joints of single layer plasterboard linings.
Fixing strap: Gypframe GFS1 to support horizontal joints in face layer of double layer board linings, or as an alternative to fixing T for single layer board linings.
Head condition: Suitably fixed up to structural soffit.
Deflection allowance: To be determined by a Structural Engineer. 25mm TBC by Structural Engineer
Core: 19mm Gyproc CoreBoard.
Horizontal joints: Gypframe GA3 angle and 122mm high strip of 19mm Gyproc CoreBoard.
Lining: Inner layer 12.5mm Gyproc FireLine on one side of framing, sheet width 1200mm; outer layer 12.5mm Gyproc Habito, sheet width 1200mm, on one side of framing.
Fixing: As clause 591B.
Screws: 25mm and 35mm British Gypsum High Performance Screws
Cavity insulation: n/a.
Recycled content: n/a.
Gyproc Sealant: As clause 516A (General) (or) As clause 521A (air pressure requirement).
Finishing: Taped seamless finish as clause 671A.
Accessories: Gyproc Profilex access panels as clause 531A – if required.
Other requirements:
PATRESSES MAY BE REQUIRED TO STRENGHTHEN AREAS WHERE ANY LIVE LOADS ARE

Habito board in partitions and linings. No 10 wood screws are only recommended fixings and holes not to be pre-drilled.
15Kg pull out load per screw provided fixings as British Gypsum specifications provided.
For live loads to grab rails, handrails etc additional pattresses/ timber framing tied to British Gypsum studs is required

Gyproc Aquabead to be installed at external corners of the partitions for increased

durability and quality of finish.
Please Note: Before altering this specification check with the design team that any proposed changes will not jeopardise the project environmental assessment rating target (BREEAM, CfSH, LEED, etc.)
Please Note: Before altering an ACTIVair specification check with the design team that any proposed changes will not jeopardise the project's indoor air quality performance or air quality management plan.
Please always refer to current literature by visiting www.british-gypsum.com

156A WALL LINING ON METAL STUDS - LINING TYPE A
Name of project: Manchester Royal Infirmary
Drawing reference(s): _____AFL-XX-GF-DR-A-22401____
British Gypsum contact: Alasdair Bell
Product reference: GypLyner IWL.
Background: n/a Normainal Thickness 97mm + 10mm cavity
Performance criteria:
Fire resistance to BS 476: Part 22: n/a.
Fire protection to BS 476: Part 21: n/a.
Sound insulation (including background): n/a.
Duty Rating to BS 5234: Parts 1 and 2: Severe.
Maximum unbraced height based on limiting deflection of L/240 at 200Pa: 4200mm.
Clear cavity width: Min. 10mm.
Timber sole plate: 38mm (nominal) x Gypframe channel width, if required.
Framing:
Studs: Gypframe 70 I 70 at 600mm centres and Gypframe 70 S 50 at abutments, openings and junctions.
Floor channel: Gypframe 72 FEC 50 (height up to 4200mm), 72 DC 60 (heights up to 8000mm), 72 EDC 80 (heights over 8000mm).
Head channel: As floor channel or as determined by deflection criteria.
Fixing T: Gypframe GFT1 to support horizontal joints of single layer board linings.
Fixing strap: Gypframe GFS1 to support horizontal joints in face layer of double layer board linings, or as an alternative to fixing T for single layer board linings.
Head condition: Suitably fixed up to structural soffit.
Deflection allowance: To be determined by a Structural Engineer. 25mm TBC by Structural Engineer
Cavity insulation: 80mm Rockwool cavity Insulation.
Recycled content: Up to 86%.
Lining: Inner layer 12.5mm Gyproc WallBoard on one side of framing, sheet width 1200mm; outer layer 12.5mm Gyproc Habito, sheet width 1200mm, on one side of framing..
Fixings: As clause 591A.
Screws: 25mm and 35mm British Gypsum High Performance Screws.
Thermal sealant: As clause 331A, if required.
Gyproc Sealant: As clause 516A.
Finishing: Taped seamless finish as clause 671A.
Accessories: Gyproc Profilex access panels as clause 531A – if required.
Other requirements: PATRESSES MAY BE REQUIRED TO STRENGHTHEN AREAS WHERE ANY LIVE LOADS ARE

Habito board in partitions and linings. No 10 wood screws are only recommended fixings and holes not to be pre-drilled.
15Kg pull out load per screw provided fixings as British Gypsum specifications provided.
For live loads to grab rails, handrails etc additional pattresses/ timber framing tied to British Gypsum studs is required

Gyproc Aquabead to be installed at external corners of the partitions for increased durability and quality of finish.

Please Note: Before altering this specification check with the design team that any proposed changes will not jeopardise the project environmental assessment rating target (BREEAM, CfSH, LEED, etc.)

Please Note: Before altering an ACTIVair specification check with the design team that any proposed changes will not jeopardise the project's indoor air quality performance or air quality management plan.

Please always refer to current literature by visiting www.british-gypsum.com

156B WALL LINING ON METAL STUDS - LINING TYPE B

Name of project: Manchester Royal Infirmary
Drawing reference(s): _____AFL-XX-GF-DR-A-22401___
British Gypsum contact: Alasdair Bell
Product reference: GypLyner IWL.
Background: n/a Norminal Thickness 84.5mm + 10 mm cavity
Performance criteria:
Fire resistance to BS 476: Part 22: n/a.
Fire protection to BS 476: Part 21: n/a.
Sound insulation (including background): n/a.
Duty Rating to BS 5234: Parts 1 and 2: Severe.
Maximum unbraced height based on limiting deflection of L/240 at 200Pa: 3600mm.
Clear cavity width: Min. 10mm.
Timber sole plate: 38mm (nominal) x Gypframe channel width, if required.
Framing:
Studs: Gypframe 70 I 70 at 600mm centres and Gypframe 70 S 50 at abutments, openings and junctions.
Floor channel: Gypframe 72 FEC 50 (height up to 4200mm), 72 DC 60 (heights up to 8000mm), 72 EDC 80 (heights over 8000mm).
Head channel: As floor channel or as determined by deflection criteria.
Fixing T: Gypframe GFT1 to support horizontal joints of single layer board linings.
Fixing strap: Gypframe GFS1 to support horizontal joints in face layer of double layer board linings, or as an alternative to fixing T for single layer board linings.
Head condition: See drawing
Deflection allowance: To be determined by a Structural Engineer.
Cavity insulation: n/a
Recycled content: n/a
Lining: One layer of 12.5mm Gyproc Habito, sheet width 1200mm, on one side of framing.
Fixings: As clause 591A.
Screws: 25mm British Gypsum High Performance Screws
Thermal sealant: As clause 331A, if required.
Gyproc Sealant: As clause 516A.
Finishing: Taped seamless finish as clause 671A.
Accessories: Gyproc Profilex access panels as clause 531A – if required.
Other requirements: PATRESSES MAY BE REQUIRED TO STRENGHTHEN AREAS WHERE ANY LIVE LOADS ARE

Habito board in partitions and linings. No 10 wood screws are only recommended fixings and holes not to be pre-drilled.
15Kg pull out load per screw provided fixings as British Gypsum specifications provided.
For live loads to grab rails, handrails etc additional pattresses/ timber framing tied to British Gypsum studs is required

Gyproc Aquabead to be installed at external corners of the partitions for increased durability and quality of finish.
Please Note: Before altering this specification check with the design team that any proposed changes will not jeopardise the project environmental assessment rating target (BREEAM, CfSH, LEED, etc.)
Please Note: Before altering an ACTIVair specification check with the design team that any proposed changes will not jeopardise the project's indoor air quality performance or air quality management plan.
Please always refer to current literature by visiting www.british-gypsum.com

226A SUSPENDED CEILING ON METAL FRAME - TYPE C1

- Manufacturer: British Gypsum, East Leake, Loughborough, Leicestershire LE12 6HX
  Website: www.british-gypsum.com Tel: 0844 800 1991 Fax: 0844 561 8816
  E-Mail: bgtechnical.enquiries@bpb.com
  Product reference: CasoLine MF
- Structural soffit: TBC
- Suspension system
  Hangers: Gypframe MF8 Strap hanger or Gypframe FEA1 steel angle fixed to soffit via MF12 soffit cleats.
  Primary Grid: Gypframe MF7 channels at 1200mm centres, suspended from hangers at 1200mm centres.
  Secondary Grid: Gypframe MF5 sections at 450mm centres, fixed to primary grid with British Gypsum wafer head
  jack-point screws or alternatively Gypframe MF9 clips.
  Perimeters: Gypframe MF6 channel.
- Lining: One layer of 12.5mm Gyproc SoundBloc.
  Fixing: As clause 590.
  Screws: 25mm British Gypsum Drywall Screws.
- Cavity Insulation: 50mm Isover Acoustic Partition Roll (APR 1200).
  Recycled content up to 86%.
- Gyproc Sealant: As clause 510.
- Finishing: Thistle Skim coat plaster (General use) as clause 681A.
- Services fittings: Refer to manufacturers requirements
- Accessories: Gyproc Profilex access panels as per White Book section 14 - if required.
- Other requirements:
  * Please Note: Before altering this specification check with the design team that any proposed
  changes will notjeopardise the project environmental assessment rating target (BREEAM, CfSH,
  LEED, etc.)
- For cut plasterboard edges/ movement joints/ window reveals/ shadow gaps use Thistle Thin Coat
  Plaster Stop Bead and appropriate Thistle Finish Coat-Plasters or Gyproc Edge Bead and appropriate jointing
  compounds. (See sections 13 & 14 British Gypsum White Book).
- For areas to receive plaster skim/Jointing on plasterboard types see Section 13 of British Gypsum White Book.

GENERAL/ PREPARATION

300 ENVIRONMENT – ISO14001
British Gypsum has ISO 14001 certification across the entire business including: mining, manufacture, distribution, and all ancillary services to support the business function.

301 ENVIRONMENT - BREEAM RATED PROJECTS
Prior to making any amendments to British Gypsum specifications consult with the design team responsible for the project for guidance. BREEAM (or similar environmental framework) ratings may be downgraded as a result of changes to this specification.

325 PREPARATION OF MASONRY TO RECEIVE WALL LININGS

- General: Suitable to receive lining system. Redundant fixtures and services removed. Cutting, chasing and making good completed.
- Holes, gaps, service penetrations, perimeter junctions and around openings: Seal.
- Adhesive fixings: Prepare substrate to achieve effective bonding.
  - Contaminants: Remove loose material, dirt, grease, oil, paper, etc.
  - Absorption: Control by dampening, priming or applying bonding agents as necessary.

335 ADDITIONAL SUPPORTS

- Framing: Accurately position and securely fix to give full support to:
  - Partition heads running parallel with, but offset from main structural supports.
  - Fixtures, fittings and service outlets. Mark framing positions clearly and accurately on linings.
  - Board edges and lining perimeters, as recommended by board manufacturer to suit type and performance of lining.

375 NEW WET LAID BASES

- Dpcs: Install under full width of partitions/ freestanding wall linings.
  - Material: Bituminous sheet or plastics.

385 SERVICE PENETRATIONS

- Ensure that fire resistance and other specified performance requirements are not impaired by service penetrations. In particular.
- Form framed opening accurately for grouped services, ducts, etc. allowing for associated fire barriers.
- Provide insulation backings to recessed electrical outlets and switches as recommended by the plasterboard manufacturer.

405 PLASTERBOARD GENERALLY

To BS EN 520: types A, H1(Moisture Resistant), F, P, D, R or I with exposed surface and edge profiles suitable to receive the specified finish.

406A GYPSUM BOARD WITH MAT REINFORCEMENT (GLASROC F FIRECASE): To EN 15283: Part 1, Types GM-F & H2 (Moisture Resistant).

407A GYPSUM BOARD WITH MAT REINFORCEMENT (GLASROC F MULTIBOARD)

a) 6mm thick to EN 15283: Part 1, Types GM-F & H1(Moisture Resistant)
b) 10mm/ 12.5mm thick to EN 15283: Part 1, Types GM-F.

408A GYPSUM FIBRE BOARD (RIGIDUR H)

To EN 15283: Part 2, Types GF, C1, I & W2.

409A GYPSUM BOARD WITH MAT REINFORCEMENT (GLASROC H TILEBACKER)

To EN 15283: Part 1, Types GM-H1(Moisture Resistant).

INSTALLATION

435 DRY LININGS GENERALLY

- General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.
- Cutting plasterboards: Neatly and accurately without damaging core or tearing paper facing.
  - Cut edges: Minimize and position at internal angles wherever possible. Mask with bound edges of adjacent boards at external corners.
- Fixings boards: Securely and firmly to suitably prepared and accurately levelled backgrounds.
- Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.

445 CEILINGS

- Sequence: Fix boards to ceilings before installing dry lined walls and partitions.
- Orientation of boards: Fix with bound edges at right angles to supports and with ends staggered in adjacent rows.
- Two layer boarding: Stagger joints between layers.

455 METAL FRAMING FOR PARTITIONS/ WALL LININGS

- Setting out: Accurately aligned and plumb.
  - Frame/ Stud positions: Equal centres to suit specified linings, maintaining sequence across openings.
  - Additional studs: To support vertical edges of boards.
- Fixing centres at perimeters (maximum): 600 mm.
- Openings: Form accurately.
  - Doorsets: Use sleeved or boxed metal studs and/ or suitable timber framing to achieve strength grade requirements for framing assembly and adequately support weight of door.
  - Services penetrations: Allow for associated fire stopping.

465A STAGGERED STUD PARTITIONS

Ensure that additional noggings, bearers, etc. are fixed between alternate studs and do not touch adjacent offset studs. Do not fix boards to adjacent offset studs. Ensure that acoustic isolation between each side of partition is maintained at corners.

468A BRITISH GYPSUM SHAFTWALL

Notwithstanding clause 455A, fix head channel securely at not more than 300mm centres, incorporating Gyproc FireStrip.

485 SUSPENDED CEILING GRIDS

- Setting out: Accurately aligned and level.
  - Grid members and hangers: Centres to suit specified linings and imposed loads.
  - Additional grid members: Provide bracing and stiffening at upstands, partition heads, access hatches, etc.
- Fixing: Securely at perimeters, grid joints, top and bottom hanger fixings.

495 MINERAL WOOL INSULATION TO METAL STUD PARTITIONS/LININGS

- Fit securely with closely butted joints, leaving no gaps. Unless the insulation is of a self supporting slab type fitted between studs, fix at head of frame using short sections Gypframe angles or proprietary clips by others.

505 INSTALLING MINERAL WOOL INSULATION

- Fitting insulation: Closely butted joints and no gaps. Use fasteners to prevent slumping or displacement.
- Services:
  - Electrical cables overlaid by insulation: Sized accordingly.
  - Ceilings: Cut insulation around electrical fittings, etc.

510 SEALING GAPS AND AIR PATHS

- Location of sealant: To perimeter abutments and around openings.
  - Pressurized shafts and ducts: At board-to-board and board-to-metal frame junctions.
- Application: To clean, dry and dust free surfaces as a continuous bead with no gaps.
  - Gaps greater than 6 mm between floor and underside of plasterboard: After sealing, fill with jointing compound.

516A ACOUSTIC SEALANT

-Manufacturer and reference: British Gypsum, Gyproc Sealant.
-Location: At junctions with adjoining structure, and at other airpaths.
-Apply as a continuous bead to clean, dry, dust free surfaces, leaving no gaps.
-After application of sealant, bulk fill gaps between floor and underside of plasterboard using Gyproc joint compound.

526 CAVITY BARRIERS (SHAFTWALL)

- Maintain continuity of fire barrier formed by perimeter channels using short lengths of close fitting plasterboard screwed into the web across joints in channel sections and around service holes, except where partitions abut plasterboard linings or masonry.
- Form continuous vertical barriers using stone mineral wool strip cut neatly to fit across the stud cavity.

555 FIRE STOPPING AT PERIMETERS OF DRY LINING SYSTEMS

- Material: Tightly packed mineral wool or intumescent mastic/ sealant.
- Application: To perimeter abutments to provide a complete barrier to smoke and flame.

560A JOINTS BETWEEN BOARDS

- Gyproc plasterboards: Lightly butt boards together.
- Square edged Gyproc plasterboards to be finished with Artex textured compound: 3mm gap.
- Glasroc F fibre reinforced gypsum boards: Lightly butt boards together.

565 VERTICAL JOINTS

- Joints: Centre on studs.
  - Partitions: Stagger joints on opposite sides of studs.
  - Two layer boarding: Stagger joints between layers.

570A HORIZONTAL JOINTS

- Horizontal joints will not be permitted in surfaces exposed to view except where the height of partition/lining exceeds the maximum available length of board. Agree positions of joints where not specified.
- For two layer boarding, stagger joints between layers by at least 600mm. If previous layer of plank plasterboard, stagger joints between layers by 300mm.
- Ensure that edges of boards are supported by additional framing. For two layer boarding framing must support the outer layer.

590A FIXING PLASTERBOARD TO METAL SUPPORTS
- Partitions/linings/casings:
- Face layer (Plasterboard):

• Fix securely tall supports at maximum 300mm centres (reduced t200mm at external angles where recommended by the board manufacturer).
- Face layer (Habito):

• Fix securely tall supports at maximum 600mm centres (reduced t400mm at external angles where recommended by the board manufacturer).
- Previous layer of plank plasterboard: Install with long edges at right angles tstuds, and fix securely teach stud using twscrews.
- Other previous layers: Fix securely tsupports around the perimeter of each board at maximum 300mm centres.
- Ceilings: Fix securely tall supports at maximum 230mm centres (reduced t150mm at board ends and at lining perimeters where recommended by the board manufacturer).
- Fix working from the centre of each board. Position screws not less than 13mm from cut edges and 10mm from bound edges of boards. Set heads in a depression; dnot break paper or gypsum core.

591 FIXING PLASTERBOARD TO METAL SUPPORTS (SHAFTWALL)
- Working from the centre of each board, fix securely to all supports at maximum 300mm centres, reduced to 200mm at external angles.
- Fix working from the centre of each board. Position screws not less than 13mm from cut edges and 10mm from bound edges of boards. Set heads in a depression; do not break paper or gypsum core.

595 DEFLECTION HEADS
• Fixing boards: Do not fix to head channels.

598A TWO LAYER LININGS TO RECEIVE CERAMIC FINISHES (SHAFTWALL)
Bond the two layers together with a continuous bead of Gyproc Sealant applied midway between studs.

FINISHING

681A SKIM COAT PLASTER FINISH: (HAND APPLIED ONLY)
- Manufacturer and reference: British Gypsum, Thistle Multi-Finish.
  Thickness: 2mm.
- Pre-Treatment: Thistle Bond-IT (Glasroc H TILEBACKER & Gyproc Moisture resistant grade plasterboards), Thistle GypPrime (required for Rigidur H boards to control suction).
- Reinforcement:
  Joints/gaps/internal corners: Any gaps exceeding 3mm pre-filled and joints reinforced using Gyproc Joint Tape alternatively Thistle ProTape FT50 or FT100 may be used.
  External corners: Thistle Thin Coat Angle Bead or Thin Coat Mini Mesh Bead.
  Edges: Thistle Thin Coat Plaster Stop Bead to all door and window surrounds.
- Fill and tape all joints except where coincident with metal beads.
- Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

695 INSTALLING BEADS/ STOPS
• Cutting: Neatly using mitres at return angles.
• Fixing: Securely using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
• Finishing: After joint compounds/ plasters have been applied, remove surplus material while still wet from surfaces of beads exposed to view.

MOISTURE RESISTANT BOARD

- Moisture resistant boards (to match specificiation) to be installed within all areas of high humidity as identified
  within the contract documentation.

K11
Rigid sheet flooring/ sheathing/ decking/ sarking/ linings/ casings

K11 Rigid sheet flooring/ sheathing/ decking/ sarking/ linings/ casings

To be read with Preliminaries/ General conditions.

TYPES OF FLOORING/ SHEATHING/ DECKING/ SARKING/ LINING/ CASINGS

110 WOOD-BASED SHEETS GENERALLY
- Standard: To BS EN 13986.
  - Evidence of compliance: Submit.

415 PLYWOOD WALL SHEATHING
- Substrate: BG metal studs as section K10.
  - Additional supports: Where detailed.
- Sheathing: Plywood manufactured to the relevant standards and quality control procedures specified in BS EN 636, and so marked.
  - Type: Swedish softwood plywood.
  - Grade: Class 1.
  - Nominal thickness/ number of plies: 12mm.
  - Other requirements: None.
- Setting out: Long edges vertical and centred on supports.
  - Expansion gap between adjacent boards (unless otherwise recommended by manufacturer): 2-3 mm.
- Fixing to supports:
  - Fasteners: Bg drywall screws to suit depth of fixing.
  - Fixing centres (maximum):
    Around board edges: 150 mm.
    Along intermediate supports: 300 mm.
  - Fixing distance from edges (minimum): 25 mm from bottom edge of board and 10 mm from other edges.

WORKMANSHIP

910 INSTALLATION GENERALLY
- Timing: Building to be weathertight before fixing boards internally.
- Moisture content of timber supports (maximum): 18%.
- Joints between boards: Accurately aligned, of constant width and parallel to perimeter edges.
- Methods of fixing, and fasteners: As section Z20 where not specified otherwise.

930 ADDITIONAL SUPPORTS
- Additional studs, noggings/ dwangs (Scot) and battens:
  - Provision: In accordance with board manufacturer's recommendations and as follows:
    Tongue and groove jointed rigid board areas: To all unsupported perimeter edges.
    Butt jointed rigid board areas: To all unsupported edges.
  - Size: Not less than 50 mm wide and of adequate thickness.
  - Quality of timber: As for adjacent timber supports.
  - Treatment (where required): As for adjacent timber supports.

940 BOARD MOISTURE CONTENT AND CONDITIONING
- Moisture content of boards at time of fixing: Appropriate to end use.
- Conditioning regime: Submit proposals.

960 FIXING GENERALLY

- Boards/ sheets: Fixed securely to each support without distortion and true to line and level.
- Fasteners: Evenly spaced in straight lines and, unless otherwise recommended by board manufacturer, in pairs across joints.
  - Distance from edge of board/ sheet: Sufficient to prevent damage.
- Surplus adhesive: Removed as the work proceeds.

975 METAL WALL FRAMING

- Setting out: Framing accurately aligned, vertical and securely fixed to surrounding structure at maximum 600 mm centres. All board edges supported.

976 MINERAL WOOL INSULATION TO METAL FRAMING

- Installation: Neat and secure with close butted joints and no gaps. Where insulation is not self supporting, fixed at head of frame using clips or other suitable proprietary fixings.

980 OPEN JOINTS

- Perimeter joints, expansion joints and joints between boards: Free from plaster, mortar droppings and other debris.
- Temporary wedges and packings: Removed on completion of board fixing.

990 ACCESS PANELS

- Size and position: Agree before boards are fixed.
- Additional noggings/ dwangs (Scot), battens, etc: Provide and fix as necessary.

K32
Panel cubicles/ duct and wall linings/ screens

K32 Panel cubicles/ duct and wall linings/ screens

To be read with Preliminaries/ General conditions.

150A DUCT LININGS (Or Equivalent)

- Manufacturer: Venesta Washroom Systems Ltd.
  - Web: www.venesta.co.uk.
  - Email: marketing@venesta.co.uk.
  - Product reference: FrameDuct Postformed HPL.
- Panels: 660kg/m³ grade moisture resistant Chipboard faced each side with High Pressure Laminate (HPL).
- Panel Thickness: 18mm nominal.
- Colour: American Walnut.
- Edge treatment: Postformed/ 1 mm thick matching PVC.
- Flashgap:
  - Material: Box framing: Front, sides, skirting & head panels 13mm compact laminate recessed flush fitting into SAA aluminium frame to create rigid box unit. Box panel colour to be Smoke/Iceberg/Graphite from Venesta standard colour range..
- Colour/ Pattern: Refeer to drg. AFL-XX-GF-DR-I-43102: 'American Walnut' to Ensuites and shower rooms, 'Smoke' to Clinical Sinks
- Site framing: Extruded aluminium base and headrail sections and rolled galvanised ultra steel wall channels.
- Subframe: Rolled galvanised ultra steel subframe with riveted aluminium bracing bars, fitted to site frame with nylon click-fix locator brackets.
- Panel sections: Fitted to subframe with concealed nylon lift-off fixing clips, using zinc plated steel rivets with butt joints fitted with zinc plated steel dowel clips and mating nylon dowel-docks.
- Included features: Hinged access panel using riveted linear-bearing hinges in zinc plated steel and nylon with riveted panel ratchets in zinc plated steel allowing 10 different opening heights.
- Subframe: Tie-back system using M8 zinc plated steel tie-back rods and supporting bracketry in zinc plated steel. Riveted slider brackets in nylon to allow the top panel to rise and fall where a mid-mounted panel is hinged.Riveted push-pull clips where applicable to allow bottom panels to be removed.
- Sanitary appliances: As specified in section N13.
- Optional features: Micro panel lock in polished stainless steel to provide a tamper proof security fixing to the duct panels.

210 SAMPLES

- General: Before placing orders submit representative samples of the following: Panel and door material and colours.
- Delivered materials/ products: To match samples.

250 INSTALLATION

- Programming: Do not install cubicles or duct/ wall panels before building is weathertight, wet trades have finished their work, wall and floor finishes are complete, and the building is well dried out.
- Accuracy: Set out to ensure frames and/ or panels and doors are plumb, level and accurately aligned.
- Modifications: Do not cut, plane or sand prefinished components except where shown on drawings.
- Fixing: Secure components using methods and fasteners recommended by the cubicle/ panel manufacturer. Prevent pulling away, bowing or other distortions to frames, panels and doors.
- Moisture and thermal movement: Make adequate allowance for future movement.

K40
Demountable suspended ceilings

K40 Demountable suspended ceilings

To be read with Preliminaries/General conditions.

TYPES OF CEILING SYSTEM

115A SUSPENDED CEILINGS TO GENERAL AREAS - TYPE C2

· Type: Rockfon MediCare 95% RH on Rocklink 24mm exposed grid system.
· Suspended ceiling to: HTM category 3 – 6 compliant.
· Manufacturer and Reference: Rockfon Ltd Lakeside House, 1 Furzeground Way, Stockley Park East, Uxbridge, Middlesex, UB11 1BD.
· Main runners shall be positioned at 1200mm centres and securely fastened to the structural soffit using straightened 2 mm diameter galvanised mild steel wire positioned at 1200mm maximum centres. All main runners joints shall be staggered, and there should be a hanger positioned within 150mm of the fire expansion point, with the maximum suspension from the perimeter not to exceed 450mm.
· 600mm x 600mm tile size: 1200mm cross tees shall be connected to and span the main runners at 600mm centres and shall be sub divided by 600mm cross tees forming a module of 600mm x 600mm
· Hangers: Straightend 2mm galvanised mild steel wire. Protective finish to suspension systems, to be galvanised.
· Provide perimeter trims as: Option A. 32mm x 19mm securely fastened to vertical wall at 450mm maximum centres. Ref 6.2.01 detail A1 of the Rockfon Technical Handbook.
· Provide perimeter trims as: Option B. 32mm x 19mm securely fastened to a shadow batten at 450mm maximum centres Ref 6.2.01 detail A2 of the Rockfon Technical Handbook.
· Membrane performance: Class 0 in accordance with Building Regulations. Material shallalso be capable of providing a minimum of 30 minutes fire resistance in accordance with BS476.
· Humidity resistance: Resist up to 100% relative humidity
· Light reflection: = 89 %
· Finish / Colour: White painted micro textured matt surface.
· Services fittings: Refer to manufactures requirements.
· Accessories: Where indicated by the Architect tiles shall be clipped at the rate of 5.6 clips per sq/m.
· Other requirements: All visible cut material edges to be painted with Rockfon edge paint.

125 SUSPENDED CEILINGS TO HIGH HUMIDITY AREAS - TYPE C3

· Type: Rockfon MediCare 100% RH on Rocklink 24mm exposed grid system.
· Suspended ceiling to: HTM category 3 – 6 compliant.
· Manufacturer and Reference: Rockfon Ltd Lakeside House, 1 Furzeground Way, Stockley Park East, Uxbridge, Middlesex, UB11 1BD.
· Main runners shall be positioned at 1200mm centres and securely fastened to the structural soffit using straightened 2 mm diameter galvanised mild steel wire positioned at 1200mm maximum centres. All main runners joints shall be staggered, and there should be a hanger positioned within 150mm of the fire expansion point, with the maximum suspension from the perimeter not to exceed 450mm.
· 600mm x 600mm tile size: 1200mm cross tees shall be connected to and span the main runners at 600mm centres and shall be sub divided by 600mm cross tees forming a module of 600mm x 600mm
· Hangers: Straightend 2mm galvanised mild steel wire. Protective finish to suspension systems, to be galvanised.
· Perimeter trims: Locations as indicated on contract drawings.
· Option A. 32mm x 19mm securely fastened to vertical wall at 450mm maximum centres. Ref 6.2.01 detail A1 of the Rockfon Technical Handbook.
· Option B. 32mm x 19mm securely fastened to a shadow batten at 450mm maximum centres Ref 6.2.01 detail A2 of the Rockfon Technical Handbook.
· Membrane performance: Class 0 in accordance with Building Regulations. Material shall also be capable of providing a minimum of 30 minutes fire resistance in accordance with BS476.
· Humidity resistance: Resist up to 100% relative humidity
· Light reflection: = 89 %
· Finish / Colour: White painted micro textured matt surface.
· Services fittings: Refer to manufactures requirements.
· Accessories: Where indicated by the Architect tiles shall be clipped at the rate of 5.6 clips per sq/m.
· Other requirements: All visible cut material edges to be painted with Rockfon edge paint.

GENERAL/ PERFORMANCE

EXECUTION

305 SETTING OUT

- General: Completed ceiling should present, over the whole of its surface exposed to the room below, a continuous and even surface, jointed (where applicable) at regular intervals.
- Infill and access units, integrated services: Fitted correctly and aligned.
- Edge/ perimeter infill units size (minimum): Half standard width or length.
- Corner infill units size (minimum): Half standard width and length.
- Grid: Position to suit infill unit sizes. Allow for permitted deviations from nominal sizes of infill unit.
- Infill joints and exposed suspension members: Straight, aligned and parallel to walls, unless specified otherwise.
- Suitability of construction: Give notice where building elements and features to which the ceiling systems relate are not square, straight or level.

310 BRACING

- General: Secure, with additional bracing and stiffening to give a stable ceiling system resistant to design loads and pressures.

315 PROTECTION

- Loading: Do not apply loads for which the suspension system is not designed.
- Ceiling materials: When necessary, remove and replace correctly using special tools and clean gloves, etc. as appropriate.

325 INSTALLING HANGERS

- Wire hangers: Straighten and tension before use.
- Installation: Install vertical or near vertical, without bends or kinks. Do not allow hangers to press against fittings, services, or insulation covering ducts/ pipes.
- Obstructions: Where obstructions prevent vertical installation, either brace diagonal hangers against lateral movement, or hang ceiling system on an appropriate rigid sub-grid bridging across obstructions and supported to prevent lateral movement.
- Extra hangers: Provide as necessary to carry additional loads.
- Fixing:
  - Wire hangers: Tie securely at top with tight bends to loops to prevent vertical movement.
  - Angle/ strap hangers: Do not use rivets for top fixing.
- Spacings: 1200mm, max 600mm from wall.

330 INSTALLING TIMBER EDGE BATTENS

- Fixing: Firmly to perimeter wall or other building structure.
  - Fasteners: Plugged and screwed to walls.
  - Fixing centres (maximum): 450 mm.

335 INSTALLING PERIMETER TRIMS

- Jointing: Neat and accurate, without lipping or twisting.
  - External and internal corners: Mitre joints generally. Overlap joints at internal corners are not acceptable.
  - Intermediate butt joints: Minimize. Use longest available lengths of trim. Align adjacent lengths.
- Fixing: Fix firmly to perimeter wall, edge battens or other building structure.
  - Fasteners: As recommended by manufacturer.
  - Fixing centres: 450 mm.

385 UPSTANDS AND BULKHEADS

- Vertical ceiling systems: Support and brace to provide alignment and stability.
- High upstands: Provide support at base of upstand.

390 OPENINGS IN CEILING MATERIALS

- General: Neat and accurate. To suit sizes and edge details of fittings. Do not distort ceiling system.

395 INTEGRATED SERVICES

- General: Position services accurately, support adequately. Align and level in relation to the ceiling and suspension system. Do not diminish performance of ceiling system.
- Small fittings: Support with rigid backing boards or other suitable means. Do not damage or distort the ceiling.
  - Surface spread of flame rating of additional supporting material: Not less than ceiling material.
- Services outlets:
  - Supported by ceiling system: Provide additional hangers.
  - Independently supported: Provide flanges to support ceiling system.

401 CEILING MOUNTED LUMINAIRES

- Support: Independent.
  - Independently supported luminaires: Suspension adjusted to line and level of ceiling.
  - Ceiling supported luminaires: Modifications and/ or extra support required: To each luminaire.
- Surface mounted luminaires: Units installed so that in event of a fire the designed grid expansion provision is not affected.
- Modular fluorescent recessed luminaires: Compatible with ceiling module. Extension boxes must not foul ceiling system.
- Recessed rows of luminaires: Provide flanges for support of grid and infill units, unless mounted above grid flanges. Retain in position with lateral restraint.
- Fire protecting/ resisting ceiling systems: Luminaires must not diminish protection integrity of ceiling system.
- Access: Provide access for maintenance of luminaires.

411 MECHANICAL SERVICES

- Fan coil units:
  - Inlet/ Outlet grilles: Trim ceiling grid and infill units to suit.
  - Space beneath: Sufficient for ceiling system components.
  - Suspension and connections: Permit accurate setting out and levelling of fan coil units.
- Air grilles and diffusers:
  - Setting out: Accurate and level.
  - Linear air diffusers: Retain in place with lateral restraint. Provide flanges for support of grid and infill units.
  - Grille/ Diffuser ceiling joints: Provide smudge rings and edge seals.
- Smoke detectors and PA speakers:
  - Ceiling infill units: Scribe and trim to suit.
  - Independent suspension: Required.
  - Flexible connections: Required.
- Sprinkler heads: Carefully set out and level.

COMPLETION

505 TOOLS

- Access tools: At Completion, supply one set of the following: 1500mm long operating poles for access panels (if required) & suction pad lifters for tiles (3 sets) .

520 USER INSTRUCTIONS

- Contents: Include the following:
  - Correct methods for removing and replacing infill units and other components.
  - Cleaning methods and materials.
  - Recommendations for redecoration.
  - Ceiling systems intended for fire protection: Limitations placed on subsequent alterations and maintenance procedures, to ensure that their fire performance is not impaired.
  - Maximum number, position and value of point loads that can be applied to ceiling system after installation.

530 SPARES

- General: At Completion supply the following: One new box of tiles for each different type.

L
Windows/Doors/Stairs

L10
Windows/ Rooflights/ Screens/ Louvres

L10 Windows/ Rooflights/ Screens/ Louvres

To be read with Preliminaries/ General conditions.

GENERAL

110 EVIDENCE OF PERFORMANCE

- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.

115 TIMBER PROCUREMENT

- Timber (including timber for wood based products): Obtained from well managed forests and/ or plantations in accordance with:
  - The laws governing forest management in the producer country or countries.
  - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
  - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied.
  - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.

120 SITE DIMENSIONS

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
- Designated items: As per Drawing no.AFL-XX-GF-DR-A-31100 .

140 CONTROL SAMPLES

- Procedure:
  - Finalise component details.
  - Fabricate one of each of the following designated items as part of the quantity required for the project.
  - Obtain approval of appearance and quality before proceeding with manufacturer of the remaining quantity.
- Designated items: Windows and hardware to agreed sizes.

155 VIEW OUT

- Windows/ opening sizes and position: Design to meet BREEAM 'View out' criteria for relevant building type.
- Submit design plan and elevation drawings showing the following:
  - All BREEAM defined 'relevant areas' dependent on building type and room depths.
  - Actual or notional workstation/ desk layouts.
  - Window/ open areas.
- Submit site plan showing: Building location and proximity to external obstructions.

160 POTENTIAL FOR NATURAL VENTILATION

- Submit design plan and elevation drawings, and calculations confirming the following: Type s of windows/
  ventilators and total openable areas. .

PRODUCTS

205 WINDOW MATERIALS SPECIFICATION

- Minimum BRE 'Green Guide to Specification Online' rating: A.

310A STEEL FIRE RATED FIXED LIGHT

- Manufacturer:
  - Arkoni Ltd, Armytage Road,Brighouse,HD6 1QF
  - Phone number 01484 404 860 Fax number 01484 719 102
  - E-mail address: info@arkoni.co.uk
  - Website: http://arkoni.co.uk
  - Installed by arkoni
  - Product reference: Jansen Janisol 4 EI60 thermally broken fire rated steel fixed light.
- Performance
  - System tested in full accordance with European fire rating standard BS EN1634-1.
  - System tested in full accordance with European smoke protection standard BS EN1634-3.
  - Approved (S.A.F.E) certification.
  - Overall average 'U' value calculated in accordance with BS EN ISO 10077 shall achieve 1.1w/m2K.
  - Exposure category to BS EN 14351-1/ Design wind load: Strucutral Engineer to Advise
- Finish as delivered:
  - All steel profiles made from hot dip galvanised steel.
  - Steel finish to be liquid coating wash primer 20µm top coat 30µm colour RAL to match existing sub-contractor to confirm on site.
- Glazing details:
  - Windows to be fitted with internal square glazing bead glazed with dry seal EPDM gaskets as per Jansen fire manuals.
  - Glass description as L40 to comply with fire assessment.
- Fixing:
  - All fixing and sealing of the fire rated systems to be completed in full accordance with the installation documentation provided through Arkoni using correct fixings and sealants.
  - The steel fire resistant window systems shall be fabricated and installed, in complete accordance with the information issued by Arkoni.
- Metal Panels:
  - In accordance with the Bre Global document Report number CC 278794 Issue 2, infill panels where required on AFL Drawing AFL-XX-GF-DR-A-31100 should have the following spec in accordance with Table 3 and subject to manufacturers approval compling with the certification document above:
  - 2No 18mm plasterboard faced boards with 1mm powder coated steel
  - Colour: To match existing window RAL - t.b.c by sub-contractor appointed
- Other: Window Film as required on AFL location sheet AFL-XX-GF-DR-A-31100

330A ALUMINIUM WINDOWS

Thermally enhanced.
Manufacturer: Comar Architectural Aluminium Systems, Unit 5, The Willow Centre, 17 Willow Lane, Mitcham,
Surrey, CR4 4NX.
T: 020 8685 9685
F: 020 8646 5096
Email: projects@parksidegroup.co.uk
Web: www.comar-alu.co.uk
Architectural Consultant: Darren Peel (darrenp@parksidegroup.co.uk) 07714 521 251
Product Reference: Comar 9P.i Top Projecting Casements to comply fully with HBN 0010 (PD).
Materials: Comar Aluminium profiles to 6063 T5/ T6 to comply with BS EN 12020 and BS 755.
Finish as delivered: PPC'ed in accordance with BS6496, BS EN 12206-1 2004 to a Qualicoat standard, by Comar/
Barley Chalu Ltd.
Colour/ texture: To match existing window RAL - t.b.c by sub-contractor appointed
Minimum film thickness: 60 µm.
Glazing details:
Double glazed insulated units to comply with BS6262: Part 4 (2005) & ADK4.
Opaque double glazed units to designated locations (refer to Architects drawing 31100).
Beading: Internal.
Ironmongery/ Accessories:
Comar WS931 locking handle (Colour TBC by architect) Espagnolette multi point locking mechanism, complete
with restrictor to BS EN 14351-1 and BS EN 13126-5 and limiting window opening to 100mm.
Where required, in accordance with ADF and M&E Consultant's report, windows will be installed with
Comar-DucoStrip trickle vents.
Aluminium extension sill will be provided.
Fixing: Manufactured & installed in complete accordance with Comar recommended procedures, exclusively by
approved dealers; contact Darren Peel: 07714 521 251 for details.
Frame sealing: Refer to AFL Prefered method, Clause 810A and confirm with Darren Peel prior to installation.
Other: Window Film as required on AFL location sheet AFL-XX-GF-DR-A-31100 and refer to clause 331

331 WINDOW FILM

Manufacturer: Pentel Pentel Contracts Limited
Dyer Street
off Ordsall Lane
Salford
Manchester
M5 4TH
Tel: 0161 872 7642
E-mail - info@pentel-contracts.com
Product: Astralux Window Films

335A ALUMINIUM WINDOWS

- " Standard: To BS 4873
  " Exposure category to BS 6375-1/ Design wind load
  - Air Permeability: 600Pa
  - Water Penetration: 950Pa
  - Wind Resistance: 2000Pa
  " Thermal improvement: Required
  - Finish as delivered: PPC'ed in accordance with BS EN 12206-1 2004 to a Qualicoat standard, by Comar/ Barley
    Chalu Ltd.
  - Colour: TBC by architect/ client.
  - Minimum film thickness: 60 µm.
  " Glazing details: Double glazed insulated units as L10/330.
  " Beading: Internal.
  " Ironmongery/ Accessories: As section L10/ 330.
  " Fixing: As section L10/ 330A.

510A TIMBER GLAZED SCREEN Fire Rated 30/30

- Manufacturer: Hanson & Beards Ltd.
  - Web: www.hansonandbeards.co.uk.
  - Email: info@hansonandbeards.co.uk.
  - Product reference: Anoscreen
- Fire resistance rating: 30'/30' integrity and insulation.
- Sound insulation rating: T.B.C by Acoustic report.
- Frame:
  - Timber species: Softwood.
  - Finish: Factory primed.
  - Timber Density: 640kg/m³
- FSC timber: FSC mixed sources.
- Glazing:
  - Type: Single glazed: 16 mm thick clear Pyrobelite (30'/30' Integrity / Insulation).
  - Manifestation: Non.
  - Joint detail: Vertical frame.
- Venetian blinds: Not required.
- Architraves:
  - Type: Refer to AFL details.
  - Timber species: Softwood with factory applied primed paint finish.
  - Timber Density: 640kg/m³
- Certifications:
  - Screen: To be in line with Certification No CF5131(Or Equivalent)
  - Frame fixing to wall : To be in line with Norsound Certification No BMT/CNA/F15196 Rev A (Or Equivalent)

EXECUTION

710 PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry floored and covered storage.
- Stored components: Stack vertical or near vertical on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

730 PRIMING/ SEALING

- Wood surfaces inaccessible after installation: Prime or seal as specified before fixing components.

760 REPLACEMENT WINDOW INSTALLATION
- Standard: To BS 8213-4.

765 WINDOW INSTALLATION GENERALLY
- Installation: Into prepared openings.
- Gap between frame edge and surrounding construction:
  - Minimum: 6MM.
  - Maximum: 10MM.
- Distortion: Install windows without twist or diagonal racking.

766 LOCATION OF OPENABLE WINDOWS IN NATURALLY VENTILATED BUILDINGS
- Location: Over 10 m from sources of external pollution.

770 DAMP PROOF COURSES IN PREPARED OPENINGS
- Location: Ensure correct positioning in relation to window frames. Do not displace during fixing operations.

780 FIXING OF WOOD FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel wood screws .
  - Spacing: When not predrilled or specified otherwise, position fasteners not more than 150 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 450 mm centres.

781 FIXING OF STEEL FRAMES
- Standard: As section Z20.
- Fasteners: Fitted to Arkoni recommendations approved FIRAS registered installer.
  - Spacing: When not predrilled or specified otherwise, position fasteners not less than 50 mm and not more than 190 mm from ends of each jamb, adjacent to each hanging point of opening lights and at maximum 900 mm centres.

782 FIXING OF ALUMINIUM FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel high tech fasteners.
  - Spacing: When not predrilled or specified otherwise, position fasteners not more than 250 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 600 mm centres.

810A SEALANT JOINTS
- Manufacturer: Tremco.
  - Web: www.tremco-illbruck.co.uk.
  - Email: uk.info@tremco-illbruck.com.
  - Product reference: illbruck TP600, FM330, ME500
  - Refer to AFL standard window detail on drawing AFL-XX-GF-DR-A-22401

820 IRONMONGERY
- Fixing: Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
- Checking/ Adjusting/ Lubricating: Carry out at Completion and ensure correct functioning.

821 IRONMONGERY

This guidance recognises that window restrictors tested to current British Standars may be inadequate in preventing a determined effort to force a window open beyond the 100mm restriction. The relevant tests for restrictors cited in BS EN 1435-1 and BS EN 13126 -5 have been developed to prevent accidental falling from windows. BS EN 1435-1 recommends that restrictors must be able to hold a window in place for 60 seconds when a static load of 350 newtons is applied to the window.

L20
Doors/ shutters/ hatches

L20 Doors/ shutters/ hatches

To be read with Preliminaries/ General conditions.

GENERAL

100 SCOPE

The scope of the works includes the manufacture and installation and commissioning of internal door sets. These will be provided with ironmongery, factory fitted wherever possible. The doors will be provided in widths to suit functional and population requirements.
The types will include fire rated and acoustic rated with various finishes to suit the function.
Doors will be either severe or heavy duty. All doors will be solid cored.
Doors to be acoustic rated where required
All glazing to be clear (non-wired)
Ironmongery will be in accordance with the project ironmongery schedules
Kick Plates and strike plates will be provided to suit traffic flow and as indicated on the project schedules.
All doors will be provided in full accordance with HTM 58

110 EVIDENCE OF PERFORMANCE

- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.

115 FIRE RESISTING DOORS/ DOORSETS/ ASSEMBLIES

- Evidence of fire performance: Provide certified evidence, in the form of a product conformity certificate, directly relevant fire test report or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements for fire resistance if tested to BS 476-22, BS EN 1634-1 or BS EN 1634-3. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.

120 NON FIRE RESISTING DOORS/ DOORSETS/ ASSEMBLIES

- Provide certified evidence, in the form of a product conformity certificate or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements to BS EN 14351-1. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.

150 SITE DIMENSIONS

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
- Designated items: New opeinings.

160 REFERENCE DRAWINGS

Document to be read in conjunction with all relevant contract drawings and specifications, it is the contractor's responsibility to provide onsite coordination with Electrical and Mechanical installations.
XX-GF-DR-A-32100 Proposed Door Location Plan & Schedule
XX-GF-DR-A-32101 Door Elevation Types
XX-GF-DR-A-32102 Door Details sht 1
XX-GF-DR-A-32103 Door Details sht 2

170 DOOR THICKNESS

None Fire Rated 44mm
FD30 44mm
FD60 54mm

406 INTERNAL DOOR FRAME GAPS Refer To AFL Door Frame Details

- Manufacturer: Norsound Ltd. Unit 5 Regents Drive, Prudhoe, Northumberland,NE42 6PX.
  - E-mail: anton@norseal.co.uk
  - Tel: 01661 830088
  - Product Type; Ecoguard Intumescent strip
  - Product reference: NOR150/ECOGUARD.
- Certificate: Manufacturers approved Fire certificate BMT/CNA/F15196 Rev A

410A TIMBER FLUSH DOORSETS: NONE FIRE RATED, LAMINATE FACED

Drawing reference(s): N/A
Manufacture reference: European Doorsets, Plantation Road, Burscough Industrial Estate, Ormskirk, Lancs. L40 8JT
Door leaf.
Core: European Doorsets Fortis Range, Solid Core, 650kg/M3
Duty: Severe Duty, cycle tested to 1,000,000+
Thickness: 44mm
Lippings: 10mm American White Ash hardwood to all four edges, min density 650kg/ M3
Finish: Stained to match Vintage wood F5372
Facings: 0.9mm Laminate from the Formica door collection range or equivalent.
Finish: Laminated - Vintage wood F5372
Glazing detail: (where applicable)
Beads: American White Ash Hardwood with a minimum density of 650kg/ M3
Finish: Stained to match Vintage wood F5372
Aperture size: 250 x 1500
Glass: 6mm Laminated
Compound: Un-setting glazing compound
Frame.
Wood species: Redwood
Finish: Primed to site
Finished: Dulux Satin wood Ref:00NN 16/000 on site
Architraves.
Wood species: Redwood
Finish: Primed to site
Finished: Dulux Satin wood Ref:00NN 16/000 on site
Seals: European Wood Products Limited standard intumescent smoke seals to the frame.
Other requirements: Stainless Steel mid rail and kick plate protection, both faces of leaf

- Internal Door Frame Fixing Gaps: Refer to Clause 406

411 TIMBER FLUSH DOORSETS: HALF HOUR - FIRE RATED, LAMINATE FACED

Drawing reference(s): N/A
Manufacture reference: European Doorsets, Plantation Road, Burscough Industrial Estate, Ormskirk, Lancs. L40 8JT
Door leaf.
Core: European Doorsets Fortis Range, Solid Core, 650kg/M3
Duty: Severe Duty, cycle tested to 1,000,000+
Thickness: 44 & 54mm (Refrer to Door Schedule)
Lippings: 10mm American White Ash hardwood to all four edges, min density 650kg/ M3
Finish: Stained to match Vintage wood F5372
Facings: 0.9mm Laminate from the Formica door collection range or equivalent.
Finish: Laminated - Vintage wood F5372
Glazing detail: (where applicable)
Beads: American White Ash Hardwood with a minimum density of 650kg/ M3
Finish: Stained to match Vintage wood F5372
Aperture size: 250x1500
Glass: 7mm Pyroguard or equivalent
Compound: Un-setting glazing compound
Frame.
Wood species: Redwood
Finish:Primed to site
Finished: Dulux Satin wood Ref:00NN 16/000 on site
Architraves.
Wood species: Redwood
Finish: Primed to site
Finished: Dulux Satin wood Ref:00NN 16/000 on site
Seals: European Wood Products Limited standard intumescent smoke seals to the frame.
Other requirements: Stainless Steel mid rail and kick plate protection, both faces of leaf

- Internal Door Frame Fixing Gaps: Refer to Clause 406

412 TIMBER FLUSH DOORSETS: 1 HOUR - FIRE RATED, LAMINATE FACED

Drawing reference(s): N/A
Manufacture reference: European Doorsets, Plantation Road, Burscough Industrial Estate, Ormskirk, Lancs. L40 8JT
Door leaf.
Core: European Doorsets Fortis Range, Solid Core, 650kg/M3
Duty: Severe Duty, cycle tested to 1,000,000+
Thickness: 54mm
Lippings: 10mm American White Ash hardwood to all four edges, min density 650kg/ M3
Finish: Stained to match Vintage wood F5372
Facings: 0.9mm Laminate from the Formica door collection range or equivalent.
Finish: Laminated - Vintage wood F5372
Glazing detail: (where applicable)
Beads: American White Ash Hardwood with a minimum density of 650kg/ M3
Finish: Stained to match Vintage wood F5372
Aperture size: 250x1500
Glass: 11mm Pyroguard (or equivalent)
Compound: Un-setting glazing compound
Frame.
Wood species: H/W (min. density of 650kg/ M3)
Finish: Primed to site
Finished: Dulux Satin wood Ref:00NN 16/000 on site
Architraves.
Wood species: Redwood
Finish: Primed to site
Finished: Dulux Satin wood Ref:00NN 16/000 on site
Seals: European Wood Products Limited standard intumescent smoke seals to the frame.
Other requirements: Stainless Steel mid rail and kick plate protection, both faces of leaf

- Internal Door Frame Fixing Gaps: Refer to Clause 406

EXECUTION

710 PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry, floored and covered storage.
- Stored components: Stacked on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

730 PRIMING/ SEALING

- Wood surfaces inaccessible after installation: Primed or sealed as specified before fixing components.

790 FIXING OF WOOD FRAMES

- Spacing of fixings (frames not predrilled): Maximum 150 mm from ends of each jamb and at 600 mm maximum centres.

810 FIRE RESISTING/ SMOKE CONTROL DOORS/ DOORSETS/ ROLLER SHUTTERS/ CURTAINS

- Gaps between frames and supporting construction: Filled as necessary in accordance with requirements for certification and/ or door/ doorset manufacturer's instructions.

830 FIXING IRONMONGERY GENERALLY

- Fasteners: Supplied by ironmongery manufacturer.
  - Finish/ Corrosion resistance: To match ironmongery.
- Holes for components: No larger than required for satisfactory fit/ operation.
- Adjacent surfaces: Undamaged.
- Moving parts: Adjusted, lubricated and functioning correctly at completion.

840 FIXING IRONMONGERY TO FIRE RESISTING DOOR ASSEMBLIES

- General: All items fixed in accordance with door leaf manufacturer's recommendations ensuring that integrity of the assembly, as established by testing, is not compromised.
- Holes for through fixings and components: Accurately cut.
  - Clearances: Not more than 8 mm unless protected by intumescent paste or similar.
  - Lock/ Latch cases for fire 60 doors requiring $\geq$ 60 minutes integrity performance: Coated with intumescent paint or paste before installation.

L30
Stairs/ ladders/ walkways/ handrails/ balustrades

L30 Stairs/ ladders/ walkways/ handrails/ balustrades

To be read with Preliminaries/ General conditions.

PRELIMINARY INFORMATION/ REQUIREMENTS

105 CONTRACTOR'S DESIGN RAISED PLANT DECK ACCESS STAIRS TO ROOF

- Design responsibility: Provide full compliant design for access.
- Structural and fire requirements:
  - Generally: As section B50.
  - Modifications: None.
  - Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.
- Functional requirements: External walkways to BS 8300 and To Building Regulations (Eng) Approved Document K.
- Additional requirements:
  Guardrails and connections to plant deck
  Galvanised steel finish
  Safe treads
  Contrasting nosings.
- Design and production information: Drawings and specification.
- Timing of submissions: 2 weeks prior manufacture.

130 SITE DIMENSIONS

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
  - Designated items: Clause 105.

COMPONENTS

250 METAL STAIRS CLAUSE 105

- Component materials/ grades:
  - Treads: Safetread mesh or steel plate.
    Slip resistance value of integral tread - water wet (minimum): PTV of 45 to BS 7976.
    Slip resistance value of integral nosing - water wet (minimum): PTV of 45 to BS 7976.
    Colour of integral nosing: Yellow.
  - Risers: Not applicable.
  - Strings: galvanised steel.
  - Guarding:
    Posts
    Galvanised steel at 500 and 1000mm above landings
    500 and 900mm above stairs.
    Handrails: Included as guardrail.
    Infill: Not required.
- Finish as delivered: Galvanized to BS EN ISO 1461.
- Workmanship: To section Z11.
- Other requirements:
  - Applied slip resistant nosings with visual contrast;
  - Joints welded and ground smooth; and
  - Matching balustrade to landing.

INSTALLATION

630 CORROSION PROTECTION OF DISSIMILAR MATERIALS

- Components/ substrates/ fasteners of dissimilar materials: Isolate using washers/ sleeves or other suitable means to separate materials to avoid corrosion and/ or staining.

640 INSTALLATION GENERALLY

- Fasteners and methods of fixing: To section Z20.
- Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
- Temporary support: Do not use stairs, walkways or balustrades as temporary support or strutting for other work.
- Applied finishes: Substrates to be even, dry, sound and free from contaminants. Make good substrate surfaces and prepare/ prime as finish manufacturer's recommendation before application.

COMPLETION

920 DOCUMENTATION

- Contents:
  - Copies of structural design calculations/ test reports.
  - General product information.
  - Installation information.
  - Inspection and maintenance reports.
- Number of copies: 2.
- Submission: Two weeks prior to date when Contractor expects work to be practically complete.

L40
General glazing

L40 General glazing

To be read with Preliminaries/ General conditions.

GENERAL REQUIREMENTS

140A MATERIAL SAMPLES

" Representative samples of Saint-Gobain Climaplus Sealed units: Submit before cutting panes.

- Sample size (minimum): 210mm x 290mm .

150 WORKMANSHIP GENERALLY

- Glazing generally: To BS 6262.
- Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
- Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.
- Materials:
  - Compatibility: Glass/ plastics, surround materials, sealers, primers and paints/ clear finishes to be used together to be compatible. Avoid contact between glazing panes/ units and alkaline materials such as cement and lime.
  - Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.

152 PREPARATION

- Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing.

155A GLASS GENERALLY

- Standards: To BS 952 and relevant parts of:
  - BS EN 572 for basic soda lime silicate glass.
  - BS EN 1096 for coated glass.
  - BS EN 1748-1 for borosilicate glass.
  - BS EN 1748-2 for ceramic glass.
  - BS EN 1863 for heat strengthened soda lime silicate glass.
  - BS EN 12150 for thermally toughened soda lime silicate safety glass
  - BS EN 12337 for chemically strengthened soda lime silicate glass.
  - BS EN 13024 for thermally toughened borosilicate safety glass.
  - BS EN ISO 12543 for laminated glass and laminated safety glass.
- Panes/ sheets: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects.
  - Edges: Generally undamaged. Shells and chips not more than 2 mm deep and extending not more than 5 mm across the surface are acceptable if ground out.
- Glass to be supplied by Saint-Gobain Glass UK (Or equivalent) - Contact Richard Hickson - richard.hickson@saint-gobain.com - +44 (0) 7773 362463
- Single Source Manufacturer - All hermetically sealed units are to be manufactured by a single source supplier.
  i.e. raw glass materials, coatings, toughening and sealed unit manufacturing processes are carried out by a Saint-Gobain approved supply chain partner.
- Minimum of 30% recycled cullet within all glass products

157 ENVIRONMENTAL PRODUCT DECLARATION
All glass installed should be supplied with an Environmental Product Declaration including glass Life Cycle
Assessments which must comply with international standards ISO14025, ISO14040 and ISO14044 . Certficate from
Saint Gobain Glass UK to be provided showing compliance with BES 6001 responsible sourcing of materials

165 HEAT SOAKING OF THERMALLY TOUGHENED GLASS
- Standard: BS EN 14179.
  - Holding period (minimum): 2 hours.
  - Mean glass temperature: 290° ± 10°C.
- Certified evidence of treatment: Submit.
- Designated locations: All areas where toughened glass is used.

168 THERMAL SAFETY
For any laminated or non-heat treated glass types a thermal safety check should be carried out via the
Installer. This is particularly important where blinds, external brise soliel and/or ceiling trenches may trap warm air
pockets close to the non-heat treated pane. It is to be noted that laminated or non-heat treated glass are not
compatible in spandrel areas.

170 GLASS SUBSTRATE
All glass types shall require SGG PLANICLEAR (Or equivalent) which is Saint Gobains standard mid iron substrate much more
Neutral than standard float glass.

TYPES OF GLAZING

382A LOW EMISSIVITY INSULATING GLASS UNITS TO ACHIEVE A TARGET G VALUE OF 0.60– GROUND FLOOR STANDARD WINDOWS TO COMPLY WITH SECURE BY DESIGN EN356 P4A
- Type: Double Glazed SGG sealed units in accordance with BS EN 1279 – Richard Hickson 07710358712 for approved glass suppliers

-Outer Pane: 6mm Securit Planiclear Saint-Gobain SGG Planitherm Ultra N ii HST
-Cavity: 16mm Warm Edge Spacer, 90% Argon filled cavity
-Inner Pane: 9.5mm Saint-Gobain SGG Stadip Protect Planilcear

Light %
Transmittance: 78
Ext. Reflectance/int: 12

Solar Radiant Heat %
Ext. Reflectance: 26
Absorption: 24
Total Transmittance (G Value): 0.58
Shading Coefficient: 0.67
U-Value W/m2K: 1.1

382B 60MINUTES FIRE RATED INTEGRIGY & INSULATION GLASS TO CONFORM WITH ARKONI Ltd - JANSEN JANISOL C4 supplied window frame as NBS Reference L10/310A complete certificated approved system:

- Type: Double Glazed FIRE RATED sealed units

  -Outer Pane: 6mm Securit Planitherm Ultra Nii / XNii HST
  -Cavity: 14mm Steel Spacer, 90% Argon filled cavity
  -Inner Pane: 25mm Contraflam 60 FIRE RESISTING GLASS for 60 Integrity & Insulation

  Glass spec to conform with FIRE Rated certificate as part of a whole window certified system supplied by the manufacturer under NBS L10/310A

M
Surface finishes

M10
Cement based levelling/ wearing screeds

M10 Cement based levelling/ wearing screeds

To be read with Preliminaries/General conditions.

TYPES OF SCREED

110A SCREED TO SHOWERS LAID TO FALLS

- Manufacturer: Flowcrete UK Ltd.
  - Web: www.flowcrete.co.uk.
  - Email: uk@flowcrete.com.
  - Product reference: Isopol SBR
- Bonding agent: Isopol SBR primer and grout.
- Isopol SBR:
  - Type: Standard.
  - Reinforcement: None.
- Typical Mix designs: Water Resistant Screeds Standard Duty
  Thickness 10 – 40+ mm
  Portland Cement 50 kgs - Portland Cement must conform to BS EN 197-1
  Class 42.5 or above
  0/4mm (MP) category 1 sand 200 kgs - Sand 0/4 mm (MP) category 1 to BS 13139:2002
  6 mm granite - Isopol SBR 10 kgs
  Water (approx.) 11 kgs
  Density 2200 kg/m3
- Product: Isopol SBR screed
  Preparatory work and application in accordance with manufacturers instructions.
  Concrete or screed substrate should be a minimum of 25N/mm2, free from laitance, dust and other contamination.
  The substrate should be dry to 75% RH as per BS 8204 & free from rising damp and ground water pressure. If above 75% RH, or no damp proof membrane is present use M-Bond Extra combined dpm and bonding agent directly beneath the Isopol SBR screed, enabling the immediate installation of floor finishes once the screed has dried.
  Curing membrane: Polythene sheet
  Detailed application instructions are available upon request.
  Minimum thicknesses:
  Bonded: 10 mm
  Light traffic 2 days 24 hrs
  Full traffic 7 days 7 days
  Curing under polythene 2 – 3 days 2 –3 days
  Drying time to receive finishes (BS 8203) 1 week per 25mm in good drying conditions (20 oC, 50% RH, good ventilation) from removal of the curing polythene sheet.

GENERALLY/ PREPARATION

205 DESIGN LIFE OF SCREEDS

- Duration: 30 years .
  - Subject to reasonable wear and tear.
- Location: Ground floor .
- Condition of use: Subject to correct loading and traffic usage throughout duration.

210 SUITABILITY OF SUBSTRATES

- General:
  - Suitable for specified levels and flatness/ regularity of finished surfaces. Consider permissible minimum and maximum thicknesses of screeds.
  - Sound and free from significant cracks and gaps.
- Concrete strength: In accordance with BS 8204-1, Table 2.
- Cleanliness: Remove plaster, debris and dirt.
- Moisture content: To suit screed type. New concrete slabs to receive fully or partially bonded construction must be dried out by exposure to the air for minimum six weeks.

255 PIPE DUCTS/ TRUNKING

- Preformed access ducts: Before laying screed, fix securely to substrates and level accurately in relation to finished floor surface.

LAYING

345 LEVEL OF SCREED SURFACES

- Permissible deviation: (allowing for thickness of coverings) +/- 3mm.

350 SCREEDING TO FALLS

- Minimum screed cover: Maintain at the lowest point.
- Falls: Gradual and consistent.
  - Gradient (minimum): As details .

355 FLATNESS/ SURFACE REGULARITY OF FLOOR SCREEDS

- Standard: In accordance with BS 8204-1, Table 5.
- Test: In accordance with BS 8204-1, Annex C.
- Sudden irregularities: Not permitted.

FINISHING/CURING

510 FINISHING GENERALLY

- Timing: Carry out all finishing operations at optimum times in relation to setting and hardening of screed material.
- Prohibited treatments to screed surfaces:
  - Wetting to assist surface working.
  - Sprinkling cement.

530 SMOOTH FLOATED FINISH

- Finish: Even texture with no ridges or steps.

540 TROWELLED FINISH TO LEVELLING SCREEDS

- Floating: To an even texture with no ridges or steps.
- Trowelling: To a uniform, smooth but not polished surface, free from trowel marks and other blemishes, and suitable to receive specified flooring material.

550 TROWELLED FINISH TO WEARING SCREEDS

- Floating: To an even texture with no ridges or steps.
- Trowelling: Successively trowel at intervals, applying sufficient pressure to close surface and give a uniform smooth finish free from trowel marks and other blemishes.

M50
Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting

M50 Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting

To be read with Preliminaries/ General conditions.

TYPES OF COVERING

150 SHEETING - PLASTICS

- Location: Circulation.
- Base: Existing Concrete slab or screed..
  - Preparation: Existing floor covering removed.
- Fabricated underlay: Levelling compound 460B for existing & surface
  DPM as clause 500B where required.
- Flooring roll: Homogeneous PVC to BS EN 649..
  - Manufacturer: Polyflor Ltd, Head Office, PO Box 3, Radcliffe New Road, Whitefield, Manchester M45 7NR UK
    Telephone 0161 767 1111, Fax 0161 767 1181, Email info@polyflor.com.
    Product reference: Perleazzo PUR, Colour 9703 Chalk Burst.
  - BS EN ISO 10874 class: 43.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: Not applicable.
    Surface roughness (Rz) (minimum) to BS 1134: n/a.
  - Recycled content: 25% (minimum to BS EN ISO 14021.
  - Width: 2m.
  - Thickness: 2mm.
  - Colour/ pattern: Refer to AFL drg: AFL-XX-GF-DR-I-43102.
- Adhesive (and primer if recommended by manufacturer): As clause 640.
- Seam welding: As recommended by manufacturer.
- Accessories: PVC skirtings as clause 770.
- Finishing: As clause 820 omitting polish finish.
- Other requirements: Construction/ expansion joints should not be bridged, joints should be in-filled with a suitable impervious, flexible compound and a flexible expansion joint cover strip should be incorporated into the floor finish to manufacturers recommendations.

151 SHEETING - PLASTICS

- Location: FM Rooms.
- Base: Existing Concrete slab or screed.
  - Preparation: Existing floor covering removed.
- Fabricated underlay: Levelling compound 460B for existing & surface
  DPM as clause 500B where required.
- Flooring roll: Homogeneous PVC to BS EN 649..
  - Manufacturer: Polyflor Ltd, Head Office, PO Box 3, Radcliffe New Road, Whitefield, Manchester M45 7NR UK
    Telephone 0161 767 1111, Fax 0161 767 1181, Email info@polyflor.com
- Product reference: Polysafe Modena PUR.
  - Colour: 4043 Agate Grey
  - BS EN ISO 10874 class: 43.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: 36 dry.
    Surface roughness (Rz) (minimum) to BS 1134: 20 micrometres.
  - Recycled content: 25% (minimum to BS EN ISO 14021.
  - Width: 2m.
  - Thickness: 2mm.
  - Colour/ pattern: Refer to AFL drg: AFL-XX-GF-DR-I-43102.
- Adhesive (and primer if recommended by manufacturer): As clause 640.
- Seam welding: As recommended by manufacturer.
- Accessories: PVC skirtings as clause 770.
- Finishing: As clause 820 omitting polish finish.
- Other requirements: Construction/ expansion joints should not be bridged, joints should be in-filled with a suitable impervious, flexible compound and a flexible expansion joint cover strip should be incorporated into the floor finish to manufacturers recommendations.

152 SHEETING - PLASTICS

- Location: User Rooms.
- Base: Existing Concrete slab or screed.
  - Preparation: Existing floor covering removed.
- Fabricated underlay: Levelling compound 460B for existing & surface
  DPM as clause 500B where required.
- Flooring roll: Homogeneous PVC to BS EN 649..
  - Manufacturer: Polyflor Ltd, Head Office, PO Box 3, Radcliffe New Road, Whitefield, Manchester M45 7NR UK
    Telephone 0161 767 1111, Fax 0161 767 1181, Email info@polyflor.com .
- Product reference: Expona Flow PUR.
  - Colour: 9858 Ligh Grey Concrete (R10)
  - BS EN ISO 10874 class: 43.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: R10.
    Surface roughness (Rz) (minimum) to BS 1134: To manufacturer's design.
  - Recycled content: 25% (minimum to BS EN ISO 14021.
  - Width: 2m.
  - Thickness: 2mm.
  - Colour/ pattern: Refer to AFL drg: AFL-XX-GF-DR-I-43102.
- Adhesive (and primer if recommended by manufacturer): As clause 640.
- Seam welding: As recommended by manufacturer.
- Accessories: PVC skirtings as clause 770.
- Finishing: As clause 820 omitting polish finish.
- Other requirements: Construction/ expansion joints should not be bridged, joints should be in-filled with a suitable impervious, flexible compound and a flexible expansion joint cover strip should be incorporated into the floor finish to manufacturers recommendations..

155 PVC SHEET FLOORING IN SPECIAL WET AREAS

- Location: En Suites and Shower rooms.
- Base: Screed as in NBS M10.
  - Preparation: N/A.
- Fabricated underlay: Screed to fall as in NBS M10.
- Flooring roll: PVC to BS EN 13553.
  - Manufacturer: Polyflor Ltd, Head Office, PO Box 3, Radcliffe New Road, Whitefield, Manchester M45 7NR UK
    Telephone 0161 767 1111, Fax 0161 767 1181, Email info@polyflor.com .
    Product reference: Polysafe Hydro Evolve, Colour: 4257 .
  - Identity code: W2.
  - BS EN ISO 10874 class: 43.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: 36 dry.
    Surface roughness (Rz) (minimum) to BS 1134: 20 micrometres.
  - Recycled content: 25% (minimum to BS EN ISO 14021.
  - Width: 2000 mm.
  - Thickness: 2mm.
  - Colour/ pattern: Refer to AFL drg: AFL-XX-GF-DR-I-43102.
- Adhesive (and primer if recommended by manufacturer): As clause 640.
- Seam welding: As recommended by manufacturer.
- Accessories: PVC skirtings as clause 770.
- Finishing: As clause 820 omitting polish finish.
- Other requirements: Construction/ expansion joints should not be bridged, joints should be in-filled with a suitable impervious, flexible compound and a flexible expansion joint cover strip should be incorporated into the floor finish to manufacturers recommendations.

160 WALL CLADDING PVC Linings to Wall in Wet rooms (Showers)

- Manufacturer: Altro Limited, telephone +44(0)1462 707600, fax +44 (0)1462 707515, email enquiries@altro.com
  - Substrate: Plasterboard non-MR. Suitable substrates must be porous, smooth, sound and straight to within 3mm over a 2m straight edge. Sand and cement rendering; plaster; plywood; plasterboard (note: moisture resistant plasterboard not suitable) and certain sound emulsion painted surfaces (subject to an adhesive test).
  - Preparation: Substrates should be sound and free from all surface contaminates. Any contamination should be cleaned from the surface using appropriate methods and allowed to dry. Dusty or friable surfaces to be stabilised using a stabilising solution of Unibond PVA diluted 1:10 with water or Altro Primer Seal (Ref: AGCPNF/01). Both stabilisers to be applied with brush or roller and allowed to dry.
    Suitable substrates- Sheet: Extruded semi-rigid PVCu sheet, EU Grade
  - Maximum service temp: 60°C
  - Fire rating: BS 476 Part 7 (1987) surface spread of flame - Class 1
    BS 476 Part 6 (1989) fire propagation - Class 0*
    (*when fixed to a non-combustible substrate)
    EN13501-1 B-s3, d0
    Product reference: Altro Whiterock™ White W103/W104 hygienic wall cladding by
  - Width: 1220 mm
  - Length: 2500 (W103 and W136) or 3000mm (W104 and W137)
  - Thickness: 2.5 mm
  - Surface finish: Satin
  - Colour: White and various for Satins
  - Light reflectance values: 68-93 (ask for details)
  - Adhesive: AltroFix™ W139 or W157 or W600 MS or W639 MS depending upon substrate
  - Joints: Flush welded
    -- Finishing:
  - Special requirements:
    This specification, in whatever format, is only valid if it is a true copy of the filed paper copy held by Altro. If you are in any doubt as to the authenticity of the copy you hold, please ask for verification.

GENERAL REQUIREMENTS

210 WORKMANSHIP GENERALLY

- Base condition after preparation: Rigid, dry, sound, smooth and free from grease, dirt and other contaminants.
- Finished coverings: Accurately fitted, tightly jointed, securely bonded, smooth and free from air bubbles, rippling, adhesive marks and stains.

220 SAMPLES

- Covering samples: Before placing orders, submit representative sample of each type.

230 CONTROL SAMPLES

- General: Complete areas of finished work in approved locations as follows, and obtain approval of appearance before proceeding:
  Circulation area
  Multi bed bay
  Bedroom .

251A LAYOUT
LAYOUT: Set out sheet coverings so that joints are kept to a minimum.
Internal and external corners to be thermoformed onsite, limiting the number of joints required.

310 MARKING:
Ensure that materials are delivered to site in original packing, clearly marked with batch number.

320 STORAGE
Store materials in a clean, warm, dry, well-ventilated place. Keep in original packing until conditioning commences.

330 COMMENCEMENT
- Required condition of works prior to laying materials:
  - Building is weathertight and well dried out.
  - Wet trades have finished work.
  - Paintwork is finished and dry.
  - Conflicting overhead work is complete.
  - Floor service outlets, duct covers and other fixtures around which materials are to be cut are fixed.
- Notification: Submit not less than 48 hours before commencing laying.

340 CONDITIONING
- Prior to laying: Condition materials by unpacking and separating in spaces where they are to be laid. Maintain resilient flooring rolls in an upright position. Unroll carpet and keep flat on a supporting surface.
- Conditioning time and temperature (minimum): As recommended by manufacturer with time extended by a factor of two for materials stored or transported at a temperature of less than 10°C immediately prior to laying.

350 ENVIRONMENT
- Temperature and humidity: Before, during and after laying, maintain approximately at levels which will prevail after building is occupied.
- Ventilation: Before during and after laying, maintain adequate provision.

PREPARING BASES

410A SUITABILITY OF NEW SUBSTRATES AND CONDITIONS
Fitting of coverings will be taken as joint acceptance by the Main Contractor and Subcontractor of the suitability of the substrates and conditions within any given area.

430 NEW WET LAID BASES
- Base drying aids: Not used for at least four days prior to moisture content testing.
- Base moisture content test: Carry out in accordance with BS 5325, Annexe A or BS 8203, Annexe A.
  - Locations for readings: In all corners, along edges, and at various points over area being tested.
- Commencement of laying coverings: Not until all readings show 75% relative humidity or less.

431 DPM TO SCREED IN WET ROOMS Applied onto Isopol screed

- Manufacturer: Tremco illbruck Ltd.,Coupland Road, Hindley Green, Wigan WN2 4HT, Great Britain
  Tel: +44 1942 259011, Fax: +44 1942 254906, Website: www.tremco-illbruck.co.uk, Contact: Mark Bradley 07714 223182 or equal.
- Product reference: ES100 One Coat Universal DPM
- Description: ES100 is a two part, epoxy based damp proof membrane.
- Standards: All aspects of the installation must be in accordance with the requirements of BS8204, BS 8203 (Installation of Resilient
  Floor Coverings) or BS 5325 (Installation of Textile Floor Coverings) and supplementary specifications.
- Moisture testing: (in accordance with British Standards 8203)
  Hygrometer readings must be taken and recorded so that the correct system can be selected.Concrete curing compounds and overtrowelled
  concrete will extend the time taken for the hygrometer to reach equilibrium. Subfloor measurement readings of up to 97% RH (measurable) can be
  accommodated with the system.
- The surface must be firm, sound, clean,dry and free of any other contaminants iable to prevent penetration into the substrate or adhesion to the surface.
  N.B. Concrete curing agents and admixtures and the misuse of these products can impair adhesion. Where doubt exists, or compatibility is unknown, a trial adhesion
  test with ES100 should be carried out and the Technical Department must be consulted.
  Remove all surface dust, etc., by industrial vacuum cleaning. Machine scarifying or shot blasting will be necessary for removal of incompatible
  curing agents, admixtures or other stubborn surface contamination.
  Shot blasting is also recommended on lightly polished surfaces.

432 PRIMER TO SCREED/DPM IN WET ROOMS Applied onto dpm on Isopol screed

- Manufacturer: Tremco illbruck Ltd.,Coupland Road, Hindley Green, Wigan WN2 4HT, Great Britain
  Tel: +44 1942 259011, Fax: +44 1942 254906, Website: www.tremco-illbruck.co.uk, Contact: Mark Bradley 07714 223182 or equal.
- Product reference: CS100 Epoxy Primer.
- Description: CS100 Epoxy Primer is a two part water based epoxy primer and bonding agent.
- Standards: All aspects of the installation must be in accordance with the requirements of BS 8204, BS 8203 (Installation of Resilient floorcoverings) or
  BS 5325 (Installation of Textile floorcoverings) and supplementary specifications.
- Preperation: Surfaces should be clean, firm and free from dust, dirt or other material liable to impair adhesion.

433 MOISTURE TOLERANT LATEX UNDERLAYMENT Applied onto 432.

- Manufacturer: Tremco illbruck Ltd.,Coupland Road, Hindley Green, Wigan WN2 4HT, Great Britain
  Tel: +44 1942 259011, Fax: +44 1942 254906, Website: www.tremco-illbruck.co.uk, Contact: Mark Bradley 07714 223182 or equal.
- Product reference: SX302 MOISTURE TOLERANT LATEX UNDERLAYMENT.
- Description: SX302 is a moisture tolerant cement based latex underlayment.
- Standards: All aspects of the imstallation must be in accordance with the requirements of BS8204, BS 8203 (Installation of Textile Floor Coverings) and supplementary specifications.
- Preperation:
  - Subfloor preparation is of key importance with products of this nature.
  - The surfa\ce should be free of oil, grease, weak material , laitance and other contaminates.
  - All subfloors, including concrete and highly polished surfaces should be always mechanically textured. The floor should then be either vacuumed or swept clean.
  - Sound stable subfloor construction is essential. The substrate should have a surface pull -off strength of >1.5N/mm2.
    -It is acceptable to apply SX302 to sound, minimised, non-water soluble adhesive residues that are firmly bonded on dry floors only; no bitumen residue.

434 ADHESIVE TO POLYSAFE HYDRO EVOLVE

- Manufacturer: Tremco illbruck Ltd.,Coupland Road, Hindley Green, Wigan WN2 4HT, Great Britain
  Tel: +44 1942 259011, Fax: +44 1942 254906, Website: www.tremco-illbruck.co.uk, Contact: Mark Bradley 07714 223182 or equal.
- Product reference: SF512 WATER RESITSTANT ADHESIVE FOR PVC & RUBBER
- Description: Tremco SF512 Water ResistantAdhesive for Rubber & PVC is a single component product derived from advanced MS polymer technology, for use with PVC & rubber flooring.
- Standards: All aspects of the imstallation must be in accordance with the requirements of BS8204, BS 8203 (Installation of Textile Floor Coverings) and supplementary specifications.
- Composition: Tremco SF512 Water Resistant Adhesive for PVC & Rubber is an advanced MS-hybrid-polymer elastic adhesive.Preperation:
  - Subfloor preparation is of key importance with products of this nature.
  - The surfa\ce should be free of oil, grease, weak material , laitance and other contaminates.
  - All subfloors, including concrete and highly polished surfaces should be always mechanically textured. The floor should then be either vacuumed or swept clean.
  - Sound stable subfloor construction is essential. The substrate should have a surface pull -off strength of >1.5N/mm2.
    -It is acceptable to apply SX302 to sound, minimised, non-water soluble adhesive residues that are firmly bonded on dry floors only; no bitumen residue.
- Performance: (Typical Values)
  DRYING TIME
  20 minutes initial skinning over
  FINAL BOND STRENGTH
  24 to 48 hours
  TENSILE STRENGTH (DIN 53504 S2)
  2.0 N/mm2
  MOVEMENT CAPABILITY
  20%
  TEMPERATURE RESISTANCE
  -40°C to +90°C
- Preperation: The surface must be firm, sound, clean, dry and free of contaminants liable to impair adhesion.
  " Metal substrates must also be prewiped with a suitable degreasing solvent ensuring the solvents are allowed to evaporate.
  " Site conditions must comply with British Standards CP 102, BS 8203, BS 5325 and supplementary specifications.
  " The surfaces must be sound, clean, firm, dry and free from oil, grease, excessive dust and other contaminants liable to impair adhesion.
  " Concrete and sand/cement screeds must be fully cured and free from laitance.
  " An effective damp proof membrane must be included in ground to earth situations.
  " Bonding to painted surfaces is not recommended.
  " Underfloor heating must have been fully commissioned as per manufacturers instructions and must be switched off 48 hours before and during installation.
  The heating should be switched on 48 hours after completion but then only gradually as per the commissioning schedule. Consult the Technical
  Department for a full specification.

440A SUITABLE SUBSTRATES: GENERAL

The specifications for finishes to receive PVCu wall cladding require:

- Good quality fairfaced brick or blockwork. Well aligned joints bagged up flush. Straight to within 3mm over a 2m straight edge and bricks/blocks flush with ones adjacent.
- Sand & cement rendering 1:3 to steel trowel finish.
- 12.5mm thick plasterboard. (do not seal with sealers as for decorating). If wall is affords fire protection ensure joints between plasterboard sheets filled with appropriate fillers.
- Minimum 9mm W.B.P. resin bonded plywood fixed at 200mm centres to suitable studwork or direct to solid substrate.
- Minimum 9mm MDF dense wood based panels fixed at 200mm centres to suitable studwork, or direct to solid substrate.
- Ceramic tiles which are clean and securely bonded to substrate.
- Certain sound painted surfaces (an adhesive test is advisable to ascertain compatibility).
- Plastered surfaces - finished with steel trowel. (pink lightweight plasters generally not suitable).
- Porous surfaces to be thoroughly sealed with diluted PVA applied to the surface 12 hours prior to the installation. The sealer should be used

440B SUITABLE SUBSTRATES - WELDED FINISH

- Surface straight to within 3mm over a 2m straight edge.
- Sand & cement rendering 1:3 to steel trowel finish.
- 12.5mm thick plasterboard. (do not seal with sealers as for decorating). If wall is affords fire protection ensure joints between plasterboard sheets filled with appropriate fillers.
- Minimum 9mm W.B.P. resin bonded plywood fixed at 200mm centres to suitable studwork or direct to solid substrate.
- Minimum 9mm MDF dense wood based panels fixed at 200mm centres to suitable studwork or direct to solid substrate.
- Certain sound painted surfaces (an adhesive test is advisable to ascertain compatibility).
- Plastered surfaces - finished with steel trowel. (pink lightweight plasters generally not suitable).
- Porous surfaces to be thoroughly sealed with diluted PVA applied to the surface 12 hours prior to the installation. The sealer should be used in a diluted ratio of 1:10. Alternatively use Altro Primer Seal Ref: AGCPNF/01

460B SMOOTHING/ LEVELLING UNDERLAYMENT COMPOUND

- Type: Latex levelling and smoothing compund.
- Manufacturer: Ardex UK Limited, Homefield Road, Haverhill, Suffolk CB9 8QP. Tel: 01440 714939, Fax: 01440 716640, Web: www.ardex.co.uk, email: technicaladmin@ardex.co.uk..
- Product reference: Arditex NA.
- 5mm overall thickness: 5mm Arditex NA applied to concrete subfloor (subject to confirmation of existing floor specification).
- Apply to base in accordance with manufacturer's Instruction incorporating chippings or single sized aggregate for applications more than 8 mm thick.
- Allow to dry before laying floor tiling/sheeting.
  Moisture Testing: If moisture readings are up to 98% RH it is recommended that a suitable surface damp proof membrane
  such as ARDEX DPM 1 C or ARDEX DPM 1 C R is applied.

LAYING COVERINGS

640 ADHESIVE FIXING GENERALLY
- Adhesive type: As specified, as recommended by covering/ underlay, manufacturer or as approved.
- Primer: Type and usage as recommended by adhesive manufacturer.
- Application: As necessary to achieve good bond.
- Finished surface: Free from trowel ridges, high spots caused by particles on the substrate, and other irregularities.

650 SEAMS
- Patterns: Matched.
- Joints: Tight without gaps.

670 BORDERS/ AND FEATURE STRIPS IN SHEET MATERIAL
- Curl: Not acceptable.
- Corners: Mitre joints.

680 SEAM WELDING COVERINGS
- Commencement: At least 24 hours after laying, or after adhesive has set.
- Joints: Neat, smooth, strongly bonded, flush with finished surface.

720 DOORWAYS
- Joint location: On centre line of door leaf.

740 EDGINGS AND COVER STRIPS
- Manufacturer: Gradus Ltd, Park Green, Macclesfield, Cheshire SK117LZ England UK Tel: 01625 428 922 Fax: 01625 433 949, Email: imail@gradusworld.com, Web: www.gradusworld.com .
  - Product reference: JM881-A01-025 .
- Material/ finish: Aluminium .
- Fixing: Secure with edge of covering gripped. Use matching fasteners where exposed to view

770 SKIRTINGS
- Types: Set-in Skirting PVC.
- Manufacturer: Gradus Ltd, Park Green, Macclesfield, Cheshire SK117LZ England UK Tel: 01625 428 922 Fax: 01625 433 949, Email: imail@gradusworld.com, Web: www.gradusworld.com.
  - Product reference: SI100 50 2.5mm, Colour Ref. Granite.
- Fixing: Secure with top edge straight and parallel with floor.
  - Corners: Mitre joints.

771 SKIRTINGS WITH CAPPING
- Types: Cove former and capping
- Manufacturer: Gradus Ltd, Park Green, Macclesfield, Cheshire SK117LZ England UK Tel: 01625 428 922 Fax: 01625 433 949, Email: imail@gradusworld.com, Web: www.gradusworld.com
  - Product reference:Gradus HCS48
  -Colour: Granite
- Cove former for floor sheet to form upstand of 100mm.

772 SKIRTINGS FORMED WITH FLOOR SHEETING

- Types: Cove former
- Manufacturer: Gradus Ltd, Park Green, Macclesfield, Cheshire SK117LZ England UK Tel: 01625 428 922 Fax: 01625 433 949, Email: imail@gradusworld.com, Web: www.gradusworld.com
  - Product reference:Gradus Cove former 38 x 38mm
- Cove former for floor sheet to form upstand of 100mm.
- Altro wall cladding to overlap floorcovering by 50mm and appropriately adhesed with BU200 Bevelled underlay as a stop for floorcovering.
- Self coved skirting, formed with separate piece of same floor covering, taken up by 150mm as manufacturer's recommendations.

780 TRAFFICKING AFTER LAYING

- Covering types: PVC.
- Traffic free period: Until adhesive is set.

820 FINISHING PLASTICS FLOORING

- Cleaning operations:
  - Wash floor with water containing neutral (pH 6-9) detergent. If necessary, lightly scrub heavily soiled areas.
  - Rinse with clean water, removing surplus to prevent damage to adhesive. Allow to dry.
- Emulsion polish: Two coats of a type recommended by covering manufacturer.

880 WASTE

- Spare covering material: Retain suitable material for patching. On completion submit pieces for selection. Hand over selected pieces to Employer.

M52
Decorative papers/ fabrics

M52 Decorative papers/ fabrics

To be read with Preliminaries/ General conditions.

TYPES OF COVERING

120 DIGITAL WALLCOVERING Locations: Reception adn Day Room

- Manufacturer: Tektura Wallcoverings 34 Harbour Exchange Square
  London E14 9GE, Tel: 020 7536 3300, Fax: 020 7536 3322, Email:
  enquiries@tektura.com, Web: www.tektura.com,
  Product TEKTURA STUDIO Trees & Gardens digitally printed wallcovering
- Description: Digifort commercial quality vinyl wallcovering laminated onto woven/non woven fabric backing.
  These designs can also be printed onto other Tektura wallcoverings.
  Weight From 350 grammes per square metre.
- Roll Size: TEKTURA STUDIO digitally printed wallcoverings are made to order, to fit customer's own wall
  dimensions. They can also be scaled up and down, stretched, or cropped to suit. The wallcovering is
  supplied in pre-cut drops. The number, width and height of each drop are determined by the final wall
  dimensions. Drops are supplied with extra selvedge for overlapping and trimming.
- Maximum Recommended size: These designs can be cropped, repeated, and enlarged or scaled down to suit.
  See recommended max print size for each design above.
- Colour/Motive: Tektura Studio digitally printed: Refer to drg. AFL-XX-GF-DR-I-43102
- Fire Rating (UK) Class 0 and 1 to BS476 part 6 and 7 when adhered to a suitable substrate. Euro classification B
  when adhered to suitable substrate. Marine fire rated
- Adhesive: Generally Tekfix Plus.
- Hanging: Digital wallcovering is printed to order, and each order is unique. The pattern match points, selvedge
  allowance and sequence in which drops should be installed are given in hanging instructions supplied with
  order. Exact pattern matching is vital. The product should not be reverse hung.
  Apply adhesive to wall surface. Carefully smooth wallcovering onto wall surface using a felt roller or feltcovered
  spatula. Note that allowance will have been made for trimming top and bottom to compensate for
  uneven walls. Overlap lengths and visually match image. (In many cases crop marks are also included at
  the top/bottom of each drop as an additional guide to pattern matching). Adjust position if necessary to
  achieve optimum pattern match. Double cut through using a sharp blade, cutting perpendicular to wall
  surface to ensure a clean join. Use a seam roller to ensure product is well bonded at the join. Remove any
  adhesive seepage immediately with warm water.
- Maintenance: Digital vinyls with fabric backing are wipeable and washable, and offer some resistance to knocks. With
  regular cleaning they will retain their original appearance for many years depending on area of use.
  Always carry out a trial in an inconspicuous area first, to ensure cleaning agent suitable. Avoid polishes,
  abrasive cleaners, solvent or bleach-based cleaners as these will damage the print and vinyl. Slight or
  moderate soiling can be removed using a combination of mild non-soapy detergent and a soft damp
  cloth/sponge. Dabbing – certainly not rubbing – is recommended to lift the soil.
  It is important to rinse off with clean water and (absorbent) cloth, always cleaning from the

skirting level
upwards. Individual stains should be removed as quickly as possible. This wallcovering contains
antimicrobials which guard against mildew and bacterial growth

- Health & Safety: This product is classified as non-hazardous and therefore does not require any special handling. This
product does not require special labelling.
- Handling/Storage: Store at ambient temperatures away from heat source. Suitable lifting equipment may be required.
- Fire Fighting: Any extinguishing media are suitable. Wear self contained breathing apparatus, protective clothing and full
face mask. Fumes should be ventilated immediately due to possible liberation of noxious gases.
- Ecological: This product is not bio-degradable. Dispose of in accordance with Local Authority regulations or via an
authorised contractor.

GENERALLY

225 WALLPAPER GENERALLY

- Standards:
  - Finished wallpapers, wall vinyls and plastics wallcoverings: To BS EN 233.
  - Wallcoverings for subsequent decoration: To BS EN 234.
  - Heavy duty wallcoverings: To BS EN 259-1.
  - Textile wallcoverings: To BS EN 266.

241 ENVIRONMENT

- Conditions: During hanging and drying of linings/ coverings, maintain working area ambient temperature and humidity levels approximate to those proposed in service.

PREPARATION

310 PREPARATION GENERALLY

- Preparation materials: Types recommended by their manufacturers and covering manufacturer for situation and substrate being prepared.
- Substrates: Sufficiently dry in depth to suit covering to be hung.
- Efflorescence salts: Remove.
- Dirt, grease and oil: Remove. Give notice if contamination of substrates has occurred.
- Substrate irregularities: Fill cracks, joints, holes and other depressions with stoppers/ fillers. Work well in and finish off flush with surface. Abrade to a smooth finish.
- Dust, particles and residues from abrasion: Remove.

330 FIXTURES AND FITTINGS

- Before commencing work: Remove the following: Any fixtures and fittings on wall.
- On completion of work: Clean and refix when coverings are dry.

360 VINYL COVERED SUBSTRATES

- Existing covering: Remove peelable vinyl surface.
- Paper base to vinyl: May be retained as a lining if in good condition and firmly adhering. Stick down lifting edges and corners.

HANGING

420 HANGING GENERALLY

- Coatings on adjacent surfaces:
  - Complete and dry before commencement of hanging coverings.
  - Efflorescence salts: Ensure no recurrence.
- Sequence of hanging coverings:
  - Apply to ceilings before walls.
  - Commence adjacent to main source of natural light.
  - From centre of feature and isolated walls.
- Surplus adhesive: Carefully remove from face of coverings, adjacent surfaces and fittings whilst still wet.
- Completed coverings: Securely adhered, smooth and free of air bubbles, wrinkles, gaps, tears, adhesive marks and stains. Joints truly vertical/ horizontal and straight.

480 LININGS

- Type and weight: To suit coverings and substrates.
- Hang lengths: With neat butt joints; do not overlap.
- Drying period: Leave for 24 hours before hanging coverings.

490 COVERINGS

- Selvedged coverings: Trim to a true straight edge before hanging, unless overlap joints are recommended by manufacturer.
- Hanging lengths:
  - Wall coverings: Vertical.
  - Ceiling coverings: Parallel to main window wall.

500 JOINTS IN COVERINGS

- Butt joints: Hang lengths with neat butt joints generally.
- Overlap joints: Hang lengths with neat overlap joints only where recommended by covering manufacturer. Cut through joints when stable to a true straight edge, without damaging substrate, and bond joints.
- Cross joints: Hang lengths in one piece generally. Cross joints are only permitted where single lengths are impractical.

520 SHADING

- Matching: Ensure colour consistency of adjacent lengths.
- Hanging lengths: Use in sequence as cut from roll.
- Alternate lengths: Do not reverse unless recommended by covering manufacturer.
- Shade variation: Check after hanging first three lengths. If variation occurs, give notice before proceeding.

530 PATTERN

- Patterned coverings: Accurately align and match.
- Mismatches: Anticipate and obtain approval for locations.

M60
Painting/clear finishing

M60 Painting/clear finishing

To be read with Preliminaries/General conditions.

|EGGSHELL TO INTERNAL WALLS

- Manufacturer: ICI Dulux Trade.
- Product reference: Diamond Eggshell water based.
- Surfaces: New uncoated.
  Comply at all times with BS 6150: 2006 Code of Practice for Painting of Buildings (or as amended) and BS
  EN ISO 12944: 1998 Paints and Varnishes - Corrosion Protection of Steel Structures by Protective Paint Systems (or as amended).
  AkzoNobel Decorative Paints will not accept responsibility for any unauthorised amendments or usage of the wording contained in this System sheet and in Paints Site Work Instructions v5.
  In order to achieve the optimum results, it is extremely important to adhere to the systems and AkzoNobel
  Decorative Paints Site Work Instructions v5 quoted.
  Products supplied for the carrying out of this specification are compliant with Statutory Instrument 2005 No.
  2773 (Environmental Protection) - The Volatile Organic Compounds in Paints, Varnishes and Vehicle
- Refinishing Products Regulations 2005
- Preparation:
  Thoroughly clean down the surfaces to remove all dirt grease and surface contaminants. Carefully remove plaster and mortar
  deposits. Remove efflorescence and under-bound slurry by brushing or rubbing with a dry cloth followed by wiping with a damp
  cloth. Allow to dry. Brush the surface to remove any loose aggregate..
  Initial coats: Spot prime any bare ferrous metal (fixings etc.) with: 1 coat of Dulux Trade Metal Primer.
  Prime overall with: 1 coat of Dulux Trade Diamond Eggshell of appropriate shade thinned up to 1 part clean water
  to 10 parts of product as appropriate..
- Number of coats: One.
  Finishing coats: Dulux Trade Diamond Eggshell of selected shade. .
- Number of coats: Two.
  Making good: Make good cracks, holes and other imperfections with Polycell Trade Interior Filler. Allow such making good to dry out
  thoroughly. Rub down smooth to match surrounding area and *dust off.
  Note
  *When rubbing down dry and/or dusting off wear a suitable face mask to avoid the inhalation of dust.
  (See ICI Trade Paints Site Work Instructions v5 Clause SW4.20 for further information.)

152 SATIN [TO INTERNAL DOOR LEAVES, FRAMES AND ARCHITRAVES] AND SW

- Manufacturer: [ICI Dulux Trade].
- Product reference: [Diamond Satinwood (Water Based)].
  Surfaces: [Preprimed and sealed].
  Comply at all times with BS 6150: 2006 Code of Practice for Painting of Buildings (or as amended) and BS
  EN ISO 12944: 1998 Paints and Varnishes - Corrosion Protection of Steel Structures by Protective Paint Systems (or as amended).
  AkzoNobel Decorative Paints will not accept responsibility for any unauthorised amendments or usage of the wording contained in this System sheet and in Paints Site Work Instructions v5.
  In order to achieve the optimum results, it is extremely important to adhere to the systems and AkzoNobel
  Decorative Paints Site Work Instructions v5 quoted.
  Products supplied for the carrying out of this specification are compliant with Statutory Instrument 2005 No.
  2773 (Environmental Protection) - The Volatile Organic Compounds in Paints, Varnishes and Vehicle
- Refinishing Products Regulations 2005
- Preparation: Woods with a knot content above that specified in BS EN 942 should not be used. New wood should ideally be preservative
  impregnated. In some situations this may be mandatory.
  [Thoroughly clean down the surfaces to remove all dirt, grease and surface contaminants. Carefully remove any plaster or mortar
  deposits. Remove oils from surface by wiping with White Spirit. Abrade overall to remove any raised grain and round all sharp
  edges to a 3mm radius and *dust off. Apply two thin coats of an appropriate knotting solution to all knots and resinous areas
  and allow to harden. Ensure all surfaces are fully dry before proceeding.
  Note
  *When rubbing down dry and/or dusting off wear a suitable face mask to avoid the inhalation of dust.
  (See ICI Trade Paints Site Work Instructions v5 Clause SW4.20 for further information.)].
  Initial coats: [Spot prime any bare metal, metal fixings nail heads etc with: 1 coat of Dulux Trade Metal Primer.
  Prime overall with: 1 coat of Dulux Trade Quick Dry Satinwood thinned up to 1 part clean water to 10 parts of product as
  appropriate.].
- Number of coats: [One].
  Undercoats: [N/A].
- Number of coats: [N/A].
  Finishing coats: [Dulux Trade Diamond Satinwood of selected shade.].
- Number of coats: [Two].
  Make good all nail-holes, open joints and open grain etc. with a Polycell Trade filler appropriate to the surface and according to
  the manufacturer's instructions. Allow making good to dry before being rubbed down smooth and *dusted off. Fillers
  Use only good quality/compatible materials and follow the manufacturers' recommendations for use, even if at variance with this
  system.
  Note
  *When rubbing down dry and/or dusting off wear a suitable face mask to avoid the inhalation of dust.
  (See ICI Trade Paints Site Work Instructions v5 Clause SW4.20 for further information.)

GENERALLY

210 COATING MATERIALS

- Manufacturers: Obtain materials from any of the following:
  As above.
- Selected manufacturers: Submit names before commencement of coating work.

215 HANDLING AND STORAGE

- Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.
- Materials from more than one batch: Store separately. Allocate to distinct parts or areas of the work.

220 COMPATIBILITY

- Coating materials selected by contractor:
  - Recommended by their manufacturers for the particular surface and conditions of exposure.
  - Compatible with each other.
  - Compatible with and not inhibiting performance of preservative/fire retardant pretreatments.

240 SURFACES NOT TO BE COATED

- Areas of acoustic ceiling tiles.

250 SURFACES TO BE CLEANED BUT NOT COATED

- Exitisting walls.

280 PROTECTION

- 'Wet paint' signs and barriers: Provide where necessary to protect other operatives and general public, and to prevent damage to freshly applied coatings.

320 INSPECTION BY COATING MANUFACTURERS

- General: Permit manufacturers to inspect work in progress and take samples of their materials from site if requested.

PREPARATION

400 PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
- Substrates: Sufficiently dry in depth to suit coating.
- Efflorescence salts: Remove.
- Dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
- Surface irregularities: Remove.
- Joints, cracks, holes and other depressions: Fill flush with surface, to provide smooth finish.
- Dust, particles and residues from preparation: Remove and dispose of safely.
- Water based stoppers and fillers:
  - Apply before priming unless recommended otherwise by manufacturer.
  - If applied after priming: Patch prime.
- Oil based stoppers and fillers: Apply after priming.
- Doors, opening windows and other moving parts:
  - Ease, if necessary, before coating.
  - Prime resulting bare areas.

420 FIXTURES AND FITTINGS

- Removal: Before commencing work remove: Coverplates, grilles, wall clocksm and other surface mounted fixtures.
- Replacement: Refurbish as necessary, refit when coating is dry.

440 PREVIOUSLY COATED SURFACES GENERALLY

- Preparation: In accordance with BS 6150, clause 11.5.
- Contaminated or hazardous surfaces: Give notice of:
  - Coatings suspected of containing lead.
  - Substrates suspected of containing asbestos or other hazardous materials.
  - Significant rot, corrosion or other degradation of substrates.
- Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
- Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
- Alkali affected coatings: Completely remove.
- Retained coatings:
  - Thoroughly clean to remove dirt, grease and contaminants.
  - Gloss coated surfaces: Provide key.
- Partly removed coatings:
  - Additional preparatory coats: Apply to restore original coating thicknesses.
  - Junctions: Provide flush surface.
- Completely stripped surfaces: Prepare as for uncoated surfaces.

590 UNCOATED PLASTERBOARD

- Depressions around fixings: Fill with stoppers/ fillers

611 WALL COVERINGS

- Retained wall coverings: Check that they are in good condition and well adhered to substrate.
- Previously covered walls: Wash down to remove paper residues, adhesive and size.

APPLICATION

711 COATING GENERALLY

- Application standard: In accordance with BS 6150, clause 9.
- Conditions: Maintain suitable temperature, humidity and air quality during application and drying.
- Surfaces: Clean and dry at time of application.
- Thinning and intermixing of coatings: Not permitted unless recommended by manufacturer.
- Overpainting: Do not paint over intumescent strips or silicone mastics.
- Priming coats:
  - Thickness: To suit surface porosity.
  - Application: As soon as possible on same day as preparation is completed.
- Finish:
  - Even, smooth and of uniform colour.
  - Free from brush marks, sags, runs and other defects.
  - Cut in neatly.
- Doors, opening windows and other moving parts: Ease before coating and between coats.

720 PRIMING JOINERY

- Preservative treated timber: Retreat cut surfaces with two flood coats of a suitable preservative before priming.
- End grain: Coat liberally allow to soak in, and recoat.

730 WORKSHOP COATING OF CONCEALED JOINERY SURFACES

- General: Apply coatings to all surfaces of components.

N
Furniture/Equipment

N10
General fixtures/ furnishings/ equipment

N10 General fixtures/ furnishings/ equipment

To be read with Preliminaries/General conditions.

PRODUCTS

110A PURPOSE MADE Fitted Storage Systems in accordance with Health Technical Memorandum 63
§ Drawing reference(s): as listed above. AFL 70 series c-sheets and 1:50 loaded plans. ADB equipment code descriptions.
§ Manufacturer: Deanestor Healthcare, Warren Way, Crown Farm Business Park, Mansfield, NG19 0FL.
§ Timber: To BS EN 942. Average moisture content of timber on delivery: 9% to 13% as BS EN 942 Annex B.
§ Wood based board materials: Carcase: constructed from 18mm 780kg/cu m. MDF faced with 120g/sq m. slightly textured white melamine. Cupboard shelves of the same material and finish and supported on adjustable shelf supports at 64mm centres. All edges to the carcase and shelf are finished with 1mm white PVC. Carcase backs to be 4.8mm pre-finished faced hardboard. Precision located dowels and glue used to firmly joint the carcase components. Box construction plinths made from 18mm MR MDF with black melamine finish to visible faces.
§ Adhesive: To manufacturers specification.
§ Other requirements: All cupboard doors and drawers manufactured from 18mm 780kg/cu m. MDF faced with decorative laminate with white balancing veneer to reverse. All edges to be finished with 2mm white PVC.
§ Ironmongery: Hinges – 'Blum' nickel-plated steel 170 degree heavy duty concealed type incorporating an integral catch.
§ Drawers: 'Blum' Metabox combined steel sides and suspension runners. Drawer bases and backs to be 15mm particle board 120kg/sq m. white melamine textured finish both sides. All drawers and doors to have plastic coated steel D handles. Locks to be fitted to cupboards.
§ Worktops: Postformed worktops – Laminate faced 18mm 650kg/cu m. moisture resistant chipboard with balancing veneer to reverse. Worktop to have 50mm. bullnose fascia and 50mm integral upstand

110B PURPOSE MADE Fitted Storage Systems in accordance with Health Technical Memorandum 71

§ Drawing reference(s): as listed above. AFL 70 series c-sheets and 1:50 loaded plans. ADB equipment code descriptions.

§ Manufacturer: Scan Modul System Ltd, Unit 4, Corona Park, Sandford Street, Chesterton, Newcastle or equal approved.

§ Timber: To BS EN 942.

§ Wood based board materials: Carcase – sides – 19mm chipboard. Melamine surface on both sides – type Kronospan (100g melamine/sq m). Top and base – 19mm chipboard. Melamine surface on both sides – type Kronospan (100g melamine/sq m). Rear wall – 5mm high density fibreboard (HDF) and white lacquered surface. Front edges – with a 2 part component (synthetic edging withrubber bead) preventing dust penetration and minimise noise when closing door.
Body assembled with a super adhesive and dowels.
Mounting base – 18mm waterproof MDF with laminate finish – colour white – PP1015U. Assembled with super adhesive and dowels. Doors and drawer fronts – 16mm chipboard. Melamine surface on both sides – type Kronospan (80g melamine/sq m. colour – light grey 2010 (Children's may vary). Robust synthetic edging (2mm) glued around the board. Worktop – 'Cliniline' worktop 670mm wide x 20mm thick with 40mm upstand to rear including metal support frame as necessary. Hinges – nickel-plated brass HAFELE hinges (type 343.05.738) with a snap lock function. Max load per door 23kg. Door opening 270 degree. Handle – synthetic blue handle with magnifying device and below this a standard grey labe. Drawer types 1 and 2, drawer dividers, baskets and trays and lock systems to Trust approval and subject to (Mock Up).

§ Adhesive: To manufacturers specification.

§ Stainless steel fabrications: Material – Unless otherwise noted stainless steel shall be grade 1.4401 acid resistant in accordance with BS EN 10088-1:2005 and shall be of gauge to suit application. Finish – All fabrications shall have exposed surfaces ground and polished to a No.3B polished dull buffed. All stainless steel nuts, screws, bolts and rivets, etc shall be of the same type stainless as in the sheet material and shall have a tumbled finish closely resembling that of a Number 4 finish. All stainless steel welding material shall be of type similar to the sheet material or a richer quality. All welds shall be made without discolouration and shall be ground, polished and passivated to blend harmoniously with the required finish. All joints in stainless steel tops shall be welded. All stainless steel worktops, with or without sinks, shall be earth-bonded in accordance with the 16th edition of the IEE Wiring Regulations BS7671.

§ Other requirements: Modular storage ancillary equipment to be agreed.

§ Finish(es) as delivered: as described above

110C PURPOSE MADE Fitted Storage Systems (None Clinical to Staff Areas)

§ Drawing reference(s): as listed above. AFL 70 series c-sheets and 1:50 loaded plans. ADB equipment code descriptions.

§ Manufacturer: Deanestor Healthcare, Warren Way, Crown Farm Business Park, Mansfield, NG19 0FL.

§ Timber: To BS EN 942. Average moisture content of timber on delivery: 9% to 13% as BS EN 942 Annex B.

§ Wood based board materials: Carcase: constructed from 18mm 780kg/cu m. MDF faced with 120g/sq m. slightly textured white melamine. Cupboard shelves of the same material and finish and supported on adjustable shelf supports at 64mm centres. All edges to the carcase and shelf are finished with 1mm white PVC. Carcase backs to be 4.8mm pre-finished faced hardboard. Precision located dowels and glue used to firmly joint the carcase components. Box construction plinths made from 18mm MR MDF with black melamine finish to visible faces.

§ Adhesive: To manufacturers specification.

§ Other requirements: All cupboard doors and drawers manufactured from 18mm 780kg/cu m. MDF faced with decorative laminate with white balancing veneer to reverse. All edges to be finished with 2mm white PVC.

§ Ironmongery: Hinges – 'Blum' nickel-plated steel 170 degree heavy duty concealed type incorporating an integral catch.

§ Drawers: 'Blum' Metabox combined steel sides and suspension runners. Drawer bases and backs to be 15mm particle board 120kg/sq m. white melamine textured finish both sides. All drawers and doors to have plastic coated steel D handles. Locks to be fitted to cupboards.

§ Worktops: Postformed worktops – Laminate faced 18mm 650kg/cu m. moisture resistant chipboard with balancing veneer to reverse

110D PURPOSE MADE Clean Utility Drug Preparation and storage area)

- Lockable internal medicines cabinets:
  " 1 no BU125 - 500x530x1850mm cupboard right hand hinged with trays
  1 no BU140 - 500x530x1850mm cupboard left hand hinged with trays
  " Available from Bristol Maid (http://www.bristolmaid.com) they are compliant with the current British Standard (currently BS2881 (1989)).
  To include Contractor supplied stop ends 50mm wide to detail to ensure doors open against walls and any protruding units and plinth to detail
  To include restraints back to wall

- Lockable external medicines cupboard:
  " 2no BU035 – 510x536x867mm cupboard right hand hinged with trays
  " Available from Bristol Maid (http://www.bristolmaid.com) they are compliant with the current British Standard (currently BS2881 (1989).
  To include Contractor supplied stop ends 50mm wide to detail to ensure doors open against walls and any protruding units and plinth to detail
  Units stacked one on the other and to include restraints back to wall

  NOTE: All the above Bristol Maid Cupboards should be ordered so that locks are suited i.e. one key for all internal and external medicines cupboards. It is also important that these cupboards are explicitly ordered as non-key retaining – which is NOT standard.

- Lockable controlled drugs (CD) cupboard:
  " 1 no CD025 - (dimensions: 500x300x550mm)
  1 no CD125 - (dimensions: 500x300x550mm)
  " One shelf (the top one) is to be designated as a separate shelf for the storage of high strength that can be used for high and low strength products (as per NPSA recommendations).
  " Available from Bristol Maid (http://www.bristolmaid.com) and is compliant with the Misuse of Drugs (Safe Custody) Regulations 1973.
  CD cupboards must not be marked in any way that shows its contents.
  Lights and alarms not required

  Fixing:
  The CD cupboard should be sited above the workbench as it is a narrower cupboard compared to others.
  Controlled Drug Cabinets should only be fitted by a competent person.
  Security level 1 Controlled Drugs Cabinets
  Cupboards should be fixed by bolts passing through the wall.
  o All nuts should be located within the cupboard and the bolts should be continuously welded at their heads to a steel plate of at least 3 mm thickness and of a size not less than that of the back face of the cupboard (in room to opposite side of wall to Clean Utility)
  o If the wall is of the partition type, the cupboard should be positioned so as to include as many internal studs as possible between the bolts.
  Refer fixing detail

- Under the counter medicine fridge
  To be hard wired to wall outlet
  " PGR151UK 151 litre capacity, glass door fridge.
  " Dimensions 845mm (h) x 595mm (w) x 600mm (d).
  Medicine Fridge thermometers
  An external calibrated Traceable digital thermometer, Model 4227 must be purchased and installed in all medicine fridges.
  The external fridge thermometer can be ordered from Distinctive Medical through Oracle, order number 14140.

- Work space:
  A worktop is required with a smooth upstand for ease of cleaning. The work top should be at least 2 metres long to allow for the safe preparation of medicines for administration, checking of deliveries, checking CD stock levels, etc. This worktop needs to be kept clear at all times and is not for the storage of anything.
  Computer has been confirmed as not required to this room. Worktop for prep procedures only

- Bins:
  Two bins to go next to the hand wash basin
  " x 1 for general waste
  " x 1 for non-infectious healthcare waste

- Medicines Returns bin:
  The medicines returns bin is for any discontinued medicines for patients or unused medicines to be returned to pharmacy.
  The medicines returns bin can be purchased from www.glasdon.com.
  " product code PRU60, 60 litre returns bin
  The medicines returns bin must be securely tethered to the floor or wall.
  Contractor to include for wall mounted locking hook type to be agreed

110E PURPOSE MADE Patient bedside drug cabinets
Patients Own Drug (POD) cabinets are suitable for the storage of the patients own medication brought in from home, individually labelled medicines from the hospital pharmacy and the patient's discharge (take home) medication.
The POD cabinet recommended for use is:
" SAC/413/B/CL 410x155x315mm solid door bottom hinged fitted with a Kitlock (keyless electronic push button lock). The number ordered will be dependent upon the number of beds on the ward area. Purchased from Bristol Maid www.Bristolmaid.com
The POD cabinets should be attached to a wall near to the patient's bedside.

120A PURPOSE MADE FURNITURE
- Main Nurse Bases - Refer to details
- Reception Counter - Refer to details

126 RECEPTION DESK
- Front Panel: 12mm Corian bonded to 18mm Plywood with adhesive as recommended by DuPont, Debbie Mathews 0792 1688 347. Panel to be fixed to sw-timber frame, min. 50 x 50mm.
  - Colour: Antarctica (to detail design).
  - LED Backlighting for signage characters ('RECEPTION'), routed out letters to inner face of corian.
  - Allow for sw-framed recess behind signage area to allow for light fitting. Access panel from back (user side).
- Main Desk: Formica Vintage Wood F5372 with Hardwood edge lipping on 50m. MDF (to detail design).
- Inset Desktop: Forbo Furniture Linoleum, Mushroom 4176 (to detail design).
- Inner not exposed facing of carcases to be laminated with neutral Formica.
- Fixings: To design and manufacturer's recommendations.

160A SHELVING SYSTEM
Manufacturer: Contractors Choice
- Size: as indicated on Room Data Sheet (deep) x 19mm thick
- Shelves:
- Material: Laminated moisture resistant chipboard
- Other components:
- adjustable spur shelf uprights and brackets
- Edging to be contrasting pvc strip
- corners to be chamfered (50x50mm)

193A WHITEBOARDS
" Type: Marker pen.
" Manufacturer: Sundeala Ltd..
- Product reference: Freshman Dry Wipe Board.
" Frame:
- Material: Aluminium.
- Finish/ Colour: Satin silver anodized.
" Size: As indicated on 70 series loaded drawings.
" Accessories: 1 set of whiteboard pens and 1 eraser with each board

195A NOTICEBOARDS
" Type: Wall mounted.
" Use: Pins.
" Manufacturer: Sundeala Ltd.
- Product reference: Notice Boards.
" Size: As indicated on 70 series loaded drawings.
" Fire resistance: Class 0.
" Board:
- Covering finish/ Colour: FRB Colour.
" Frame: Aluminium.
- Finish/ Colour: Satin silver anodized

205 WORKTOPS To Staff Areas
- Standard HTM63:
- Material:Worktops: Moisture resistant 40mm thick MDF Laminate faced Pressure Laminate, single postformed with 50mm integral upstand available in depths of 510mm, 610mm and 710mm. 28mm/38mm thickness. Faced and lipped on exposed ends.
with inset sinks where indicated on plan.].

230A CURTAIN RAILS BED BAYS
- Manufacturer: [Manufacturer: Silent Gliss Ltd. - Web: www.silentgliss.co.uk. - Email: info@silentgliss.co.uk] or equal approved system.
- Product reference: [6100 Room Divider/ Shower Rail System, incorporating 6650 Hospital Cubicle Safety Device System].
Dimensions: As drawing.
Fixing: [As drawing].
Accessories: [
- Aluminium wall brackets for fixing parallel to wall Ref 6503;
- End cover/ stop Ref 6611;
- End stop Ref 6007;
- Dust cover for track profile Ref 6110;
- Gliders, additional Ref 6083;
- Glider eyes in strip form (20 No. 6083) Ref 6096; and
- Gliders only Ref 6143.
- Wall bracket dimension: 200mm]

240A BLINDS INTERNAL WINDOWS

- Manufacturer: Pentel Contracts or Equal Approved.
  -Product reference: Astralux 1000 vertical blind with 89mm vane.
  -Finish: White powder coat
  -Fabric: Obscura
  -Fabric ref: Refer to Finishes Schedule

EXECUTION

710 MOISTURE CONTENT OF WOOD AND WOOD BASED BOARDS

- Temperature and humidity: During delivery, storage, fixing and to handover maintain conditions to suit specified moisture contents of timber components.
- Testing: When instructed, test components with approved moisture meter to manufacturer's recommendations.

720 INSTALLATION GENERALLY

- General: As Preliminaries section A33.
- Fixing and fasteners: As section Z20.
- Services: As Engineering Services specification.

770 TRIMS

- Lengths: Wherever possible, unjointed between angles or ends of runs.
- Running joints: Where unavoidable, obtain approval of location and method of jointing.
- Angle joints: Mitred.

COMPLETION

910 GENERAL

- Doors and drawers: Accurately aligned, not binding. Adjusted to ensure smooth operation.
- Ironmongery: Checked, adjusted and lubricated to ensure correct functioning.

920 APPLIANCES

- Test: Ensure that all functions and features work correctly.
- Documentation: Submit guarantees, instruction manuals, etc.

N13
Sanitary appliances and fittings

N13 Sanitary appliances and fittings

To be read with Preliminaries/ General conditions.

PRODUCTS

300A WC STANDARD Contour 21

Product :Contour 21 Back To Wall
Rimless Raised Height WC Pan

Contour 21 back to wall rimless raised height WC pan with horizontal outlet
Conceala 2 cistern 4.5/3 or 4/2.6 litre dual flush valve side supply and internal overflow, alternative height plastic flushbends, no flushplate
Contour 21 seat no cover, top fixing hinges and retaining buffers
Contemporary flush plate dual flush, Armitage Shanks logo, for Conceala 2 cisterns
Configuration options
Conceala 2 cistern delay fill 4.5/3 or 4/2.6 litre dual flush valve bottom supply and internal overflow, alternative height plastic flushbends, no flushplate
Conceala 2 cistern delay fill 4.5 litre single flush syphon low level bottom supply and internal overflow plastic flushbend, CP lever
Conceala 2 cistern 4.5 or 6 litre single flush syphon side supply and internal overflow plastic flushbend, long CP lever
Conceala 2 cistern 4.5 litre single flush valve side supply and internal overflow, alternative height plastic flushbends
Contour 21 seat and cover, top fixing hinges
Contour 21 seat retaining buffers, white
Finger push button pneumatic, stainless steel for 31mm maximum thickness partition
Contemporary flush plate dual flush, Armitage Shanks logo for Conceala 2 cisterns
Palm push button Pneumatic, stainless

300B WC ASSISTED Contour 21

Product :Contour 21 Back To Wall
Rimless Raised Height WC Pan

WC H) Contour 21 back to wall rimless raised height WC pan with floor fixing kit horizontal outlet, 70cm NHS projection
Conceala 2 cistern 4.5 or 6 litre single flush syphon side supply and internal overflow plastic flushbend, long CP lever
Contour 21 seat no cover, top fixing hinges and retaining buffers
S6481 Contour 21 back support rail for 70cm projection HTM64 WC, 40 x 17 x 35mm diameter tube
Cushion for back support with clips, new design
Contour 21 flushpipe constructed, necessary for installation
Configuration options
Conceala 2 cistern 4.5 litre single flush valve side supply and internal overflow, alternative height plastic flushbends
Conceala 2 cistern 4.5/3 or 4/2.6 litre dual flush valve side supply and internal overflow, alternative height plastic flushbends, no flushplate
Sensorflow 21 WC flushing device, panel mounted sensor complete with concealed valve and 4 or 4.5 litre duct cistern
Finger push button pneumatic, stainless steel for 31mm maximum thickness partition
Palm push button Pneumatic, stainless steel for 31mm maximum thickness partition
Contemporary flush plate dual flush, Armitage Shanks logo, for Conceala 2 cisterns
Panekta outlet Connector, finned pattern to convert horizontal outlet WCs to S or turned P trap
Panekta outlet Connector, finned pattern to convert horizontal outlet WCs to P trap

331A SINKS – SIT ON

Product Ref: Stewart Inset Sink Single Bowl,
LH drainer 2 T/H 1015x505

- Stewart inset sink stainless steel single bowl no overflow and left hand drainer 940 x 485mm, 2 tapholes at 200mm centres
S8265 Markwik ½" high neck pillar taps
S8768 Waste 1½" unslotted chain waste, plug and screw stay, 90mm tail
S8925 Trap 1½" plastic resealing bottle with 75mm seal, multi-purpose outlet
Configuration options
A5900 TMV Thermostatic mixing valve 15mm
Material
Stainless

331B SINKS STA
Manufacturer: Armitage Shanks

Product Ref: HBN 00-10 HTM64 (ST A) Doon Single Bowl Single Drainer Sink
SNS756a - LH Drainer
SNS756b - RH Drainer

ST A single bowl, single LH drainer stainless steel sink unit, with earthing terminal.
Screw to wall SS subframe (Dirty Utility) or mounted on base unit (Clean Utility)

TAP, bib, lever with extensions, hospital pattern, pair hot and cold, 1/2 in., HTM 64 TBH1

A5900 TMV Thermostatic mixing valve 15mm

Material: Stainless Steel

335A WASH BASINS - WALL HUNG

- Product Ref:Contour 21 Washbasin 50cm No
Taphole No Chainstay Hole or
Overflow - General Use

Contour 21 back outlet washbasin, 50cm, no tapholes, no overflow, no chainstay hole
Markwik 21 integral thermostat, demountable panel mixer, single sequential lever, detachable spout and Armitage Bioguard outlet fitted
Waste 1¼" outlet adaptor for all Contour back outlet washbasins
Trap 1¼" plastic resealing bottle, 75mm seal, multi-purpose outlet
Concealed hangers pressed Steel, toggle bolts and clips for Contour washbasins

335B WASH BASINS - WALL HUNG

Product Ref:Portman 21 Washbasin 60cm 2
Taphole, No Overflow Or
Chainstay Hole

Portman 21 washbasin 60cm, 2 tapholes, no overflow or chainstay hole
Wall fixing set
(TP5) Piccolo 21 inclined ½" washbasin pillar taps, lever operated, dual hot and cold indices, anti-vandal water saving nozzle
(WT3) Waste 1¼" waste with bead chain & plug 80mm unslotted tail, screw stay
(TRR1/P) Trap 1¼" plastic resealing bottle, 75mm seal, multi-purpose outlet

335C WASH BASINS - WALL HUNG

Product Ref:Portman 21 Washbasin 50cm
RH Taphole, No Overflow Or
Chainstay Hole

LB G M) Portman 21 washbasin 50cm, 1 right hand taphole, no overflow, no chainstay hole
Wall fixing set
Contour 21 Thermostatic basin mixer with Bioguard
(WT3) Waste 1¼" waste with bead chain & plug 80mm unslotted tail, screw stay
(TRR1/P) Trap 1¼" plastic resealing bottle, 75mm seal, multi-purpose outlet
Configuration options
Basin fixing set for IPS panels or block walls
(TP6) Contour 21 washbasin mixer thermostatic 1 hole, single sequential long lever, copper tails
Avon 21 washbasin mixer 1 hole, self closing push button, variable temperature control with 15mm female connector flexible hoses on inlets
Waste 1¼" brass swivel plug waste, 80mm unslotted tail
(WT1) Waste 1¼" brass strainer waste, 80mm unslotted tail
TMV Thermostatic mixing valve 15mm
Trap 1¼" metal bottle, 75mm seal, outlet screwed 1¼" BSP male with compression nut and ring
Bracket concealed with clamps and centre waste support for Portman 21 washbasins 60 and 50cm

335D WASH BASINS - WALL HUNG

Product Ref:Portman 21 Washbasin 40cm
RH Taphole, No Overflow or
Chainstay Hole

LB G S) Portman 21 washbasin, 40 x 37cm, single right hand taphole, no overflow, no chainstay hole
Wall fixing set
Contour 21 Thermostatic basin mixer with Bioguard
Waste 1¼" plastic waste with bead chain and plug, 80mm slotted tail, bolt stay
(TRR1/P) Trap 1¼" plastic resealing bottle, 75mm seal, multi-purpose outlet
Configuration options
Basin fixing set for IPS panels or block walls
(TP6) Contour 21 washbasin mixer thermostatic 1 hole, single sequential long lever, copper tails
Bracket concealed with clamps and centre waste support for Portman 21, 40cm washbasins
Material
Vitreous

375A SHOWER UNITS Horne TSV
Manufacturer: Horne Engineering
product ref: SHOWER, HORNE DUAL MODE LIGATURE RESISTANT SHOWER PANEL WITH AUTO DIVERT TSV1-A605 BLR

Integral HORNE TSV1 Thermostatic Shower Valve pre-plumbed within a white powder coated aluminium panel. Unsupervised
mode: shower controls and outlet fitting with ligature resistant features. Assisted showering mode: ligature resistant shower
controls and detachable 2m hose with single function handset

382A SLOP HOPPERS Armitage Shanks

-

Product Ref:Dee Bi Sink & LH Slophopper,
No Taphole

(DU HS) Dee left hand slop hopper with sink, back inlet
S4663 Flushpipe 850 x 35mm diameter for slop hopper
Bib tap extensions ½" x 100mm long (pair)
Conceala 2 cistern 6 litre single flush syphon high level side supply and internal overflow, lever with chain
P trap outlet, plastic for slop hoppers
(TRR2/P) Trap 1½" plastic resealing bottle with 75mm seal, multi-purpose outlet
Waste 1½" unslotted strainer waste, 50mm long, 75mm dia. brass
(TB H1) Markwik ½" bib taps
Bib tap wall mounts ½" for concealed plumbing (pair)
Configuration options
High Level Lever Assembly For Conceala 1 Cistern
Leg 900mm stainless steel to floor (2 required)
Conceala 1 cistern 9 litre single flush syphon, alternative height plastic flushbends side supply and internal overflow, no lever
S trap outlet, plastic for slop hoppers

EXECUTION

610 INSTALLATION GENERALLY

- Assembly and fixing: Surfaces designed to falls to drain as intended.
- Fasteners: Nonferrous or stainless steel.
- Supply and discharge pipework: Fix before appliances.
- Fixing: Fix appliances securely to structure. Do not support on pipework.
- Jointing and bedding compounds: Recommended by manufacturers of appliances, accessories and pipes being jointed or bedded.
- Appliances: Do not use. Do not stand on appliances.
- On completion: Components and accessories working correctly with no leaks.
- Labels and stickers: Remove.

620 NOGGINGS AND BEARERS

- Noggings, bearers, etc. to support sanitary appliances and fittings: Position accurately. Fix securely.

630 TILED BACKGROUNDS OTHER THAN SPLASHBACKS

- Timing: Complete before fixing appliances.
- Fixing appliances: Do not overstress tiles.

650 INSTALLING WC PANS

- Floor mounted pans: Screw fix and fit cover caps over screw heads. Do not use mortar or other beddings.
- Seat and cover: Stable when raised.

670 INSTALLING CISTERNS

- Cistern operating components: Obtain from cistern manufacturer.
  - Float operated valve: Matched to pressure of water supply.
- Overflow pipe: Fixed to falls and located to give visible warning of discharge.
  - Location: Agreed, where not shown on drawings.

680 JANITORIAL

Product Ref:Janitorial Sink Stainless Steel
Unit, with mixer

Janitorial unit stainless steel 50cm wide x 57cm projection x 90cm high complete with mixer tap with restricted swivel, tamper proof concealing panel for washbasin trap, hinged bucket grating to sink, stainless steel legs with adjustable feet and earthing tag.
Trap 1¼" plastic resealing bottle, 75mm seal, multi-purpose outlet
Trap 1½" plastic resealing bottle with 75mm seal, multi-purpose outlet
Configuration options
TMV Thermostatic mixing valve 15mm

690 TAPS

Product Ref:Contour 21 Washbasin Mixer Therm. Single Lever Sequential Copper Tails

Conforms to HTM64 (2006), HTM04 and Doc M. TMV 3 Thermostatic Mixing Valve approved.
Special Notes
Suitable for use with handrinse basins in public areas and Doc M. Satisfies DDA requirements. Meets the requirements laid out in HTM 64, HTM 04. Single easy use lever operates on/off and temperature control. Eliminates the need for premixed water. Suitable for high and low pressure systems.To ensure system hygiene and user safety the water flow always commences from cold. Traditional backnut fixing for added security. Fits into a standard pillar tap hole. Flow rate stays constant even when temperature setting is changed (providing supply pressure is 1.0 bar or higher). Flow rate limited to a practical economic level irrespective of supply pressure for suitability with high pressure supplies. Thermostatically set to 41°C with single lever to control flow of water. Durable and easy to clean finish. Supplied complete with strainer/check valves and flow limiters. Serviceable from above the basin (once supplies are isolated). Cartridge based system for easy servicing/repair.

690A TAPS

Product Ref:Markwik 21 Panel Mixer, Demountable Single Lever Sequential, Detachable Spout and Bioguard.

Conforms to HBN 00.10, HBN 00.09 and HTM 04-01 Addendum 2013.
Special Notes
This product is fitted with an Armitage Bioguard outlet which reduces the opportunity for bio film attachment and is lined with anti-microbial copper.
Single lever operates on/off and temperature control. Suitable for high and low pressure systems.
Unique built-in thermal disinfection cleansing feature using kit S8239NU a bridging hose which is reusable. A purging tool A4556AA is also available to facilitate initial installation or aid in system disinfection.
Flow rate regulated to maximum of 10 Litres per minute.
Includes thermal disinfection features, spout is removable for autoclave sterilisation, body demounts from legs or panel for submergible disinfection and Bioguard outlet also helps protect against bacteria.
* Line drawings shows recommended height over vessel please allow for clearance to any upstands. Especially suited to medium and large hospital pattern integral back outlet basins and washing associated with clinical or nursing procedures

690B TAPS

Product Ref:Piccolo 21 Inclined 1/2 In Washbasin Pillar Taps, Dual Indices

TP5) Piccolo 21 inclined ½" washbasin pillar taps, lever operated, dual hot and cold indices, anti-vandal water saving nozzle
Configuration options
Material
Chrome Plated Brass
Weights
B8262 1.60KG
Colours
Chromium plated (AA)
Flow rates
5 Litres per minute @ 3 bar pressure
Special Notes
Inlets screwed 1/2in BSP male, bored and coned for 15mm copper tube. Servicing valves are recommended for isolating fittings. Consideration should be given to safe hot water delivery and the use of an appropriate temperature reduction device see A5900AA. Fitted with 5 Litres per minute regulated outlet with optional outlet 8.5 Litre per minute @ 0.1

690C TAPS

Product Ref:Markwik 1/2in High Neck Pillar Taps H &C

S8265 (TP 3) Markwik ½" high neck pillar taps
Configuration options
Material
Chrome Plated Brass
Weights
S8265 2.29KG
Colours
Chromium plated (AA)
Standards
BS 5412: 1996, BS EN 200
Functional Standard
Special Notes
Inlets screwed 1/2in BSP male. For use in connection with domestic services procedures.

690D TAPS

Product Ref:Markwik 1/2in Bib Taps Lever H & C

(TB H1) Markwik ½" bib taps
Bib tap wall mounts ½" for concealed plumbing (pair)
Configuration options
Bib tap extensions ½" x 75mm long (pair)
Bib tap extensions ½" x 100mm long (pair)
Bib tap extension ½" x 75mm long (single)
Bib tap wall mount ½" for exposed plumbing (single)
Bib tap wall mounts ½" for exposed plumbing (pair)
(TB H1) Bib tap wall mount ½" for concealed plumbing (single)
Material
Chrome Plated Brass
Weights
1.65KG
0.79KG
Colours
Chromium plated (AA)
Special Notes
Inlets screwed 1/2in BSP male.
For use in conjunction with sinks and hoppers, with appropriate length extension.
Flow rate 7.2 Litres per minute @

700 CISTERN

Product Ref:Conceala 2 Cistern Low Level 4.5 or 6 Litre Syphon Side Supply

Conceala 2 cistern 4.5 or 6 litre single flush syphon side supply and internal overflow plastic flushbend, long CP lever
Configuration options
Material
Plastic
Weights
3.00KG
Colours
Neutral / No Finish (67)
Standards
Cistern to BS EN 14055
Special Notes
Lever supplied with cistern is suitable for 150mm max. wall thickness. Longer levers for thicker walls can be purchased.
Capacity
5

700A CISTERN

Product Ref:Conceala 2 Cistern Universal Height 6/4 Litre Valve, Top Inlet

Conceala 2 cistern 6/4 litre dual flush valve top inlet and internal overflow, alternative height plastic flushbends
Contemporary flush plate dual flush, Armitage Shanks logo for Conceala 2 cisterns
Configuration options
3 metre tube
Contemporary flush plate dual flush, Ideal Standard logo for Conceala 2 cisterns
Contemporary flush plate dual flush, unbranded for Conceala 2 cisterns
Material
Plastic
Weights
3.00KG
1.10KG
Colours
Neutral / No Finish (67)
Standards
Cistern to BS EN 14055
Special Notes
Cistern is supplied with 2 x 800mm lengths of plastic air tubes. Optional 3m lengths can be purchased where remote operation is required.
Capacity

700B CISTERN

Product Ref:Regal Low Level Cistern Side Supply, 6 Litre (fittings reversible)

Regal low level plastic slim line cistern 6 litre single flush syphon side supply and internal overflow, CP lever
Configuration options
Material
Plastic
Weights
3.20KG
Colours
White (01)
Standards
Cistern to BS EN 14055
Capacity
6

710 INSTALLING TAPS

- Fixing: Secure against twisting.
- Seal with appliance: Watertight.
- Positioning: Hot tap to left of cold tap as viewed by user of appliance.

720 INSTALLING WASTES AND OVERFLOWS

- Bedding: Waterproof jointing compound.
- Fixing: With resilient washer between appliance and backnut.

N15
Internal fire and safety signage systems

N15 Internal fire and safety signage systems

To be read with Preliminaries/ General Conditions.

GENERAL

110 FIRE SIGNAGE SYSTEMS FOR ESCAPE ROUTE (GLOW IN DARK)

- System manufacturer: Safetysigns4less
- -Web: www.safetysigns4less.co.uk
  - E-mail - sales@safetysigns4less.co.uk
  - Telephone - 08001777118.
  - Product reference: GITD Fire Exit Arrow Down - XY1025-R, Left - XY1028-R, Right - XY1031-R, Up - XY1022-R.
- Layout and dimensions: As AFL drawing AFL-XX-GF-DR-A-67100 .
  - Language: English.
- Sign type: 1mm Rigid Photoluminescent Plastic.
  - Manufacturing process: Manufacturer's standard.
- Supports/ Fixings: Ceiling, suspended wire noted as FEC on AFL Drawing .
- Accessories: Clip connectors to suspended ceiling grid only if required contractor to confirm.

110A FIRE SIGNAGE SYSTEMS FOR ESCAPE ROUTE (STANDARD TYPES)

- System manufacturer: Safetysigns4less
- -Web: www.safetysigns4less.co.uk
  - E-mail - sales@safetysigns4less.co.uk
  - Telephone - 08001777118.
  - Product reference: Fire Exit Arrow Down - XY0442-R, Left - XY0443-R, Right - XY0440-R, Up - XY0441-R.
- Layout and dimensions: As AFL drawing AFL-XX-GF-DR-A-67100 .
  - Language: English.
- Sign type: 1mm Rigid Plastic sheet.
  - Manufacturing process: Manufacturer's standard.
- Supports/ Fixings: Wall mounted noted as FE on AFL Drawing.
- Accessories: Not required.

SYSTEM PERFORMANCE

240 SIGNAGE SYSTEM SPECIFICATION

- Content: Signs including facing information, components, inserts, accessories and fixings necessary to complete the system.
- Geometric shapes, colours and layout: To BS ISO 3864-1.
- Escape route: In accordance with BS 5499-4 and BS ISO 16069.
- Safety meaning: In accordance with BS EN ISO 7010.
- Water safety: In accordance with BS ISO 20712-1.

PRODUCTS

305 INTERNAL SIGNAGE PRODUCTS GENERALLY

- Standard: To BS 559.
- Colorimetric and photometric properties: To BS ISO 3864-4.

330 PLASTICS SHEET FOR ESCAPE ROUTE SIGNS

- Material: Rigid Plastic.
- Manufacturer: Refer to clause 110A.
  - Product reference: Refer to clause 110A.
- Component thickness: 1mm.
- Finish: Manufacturer's standard.
- Perimeters: Radiused corners.

400 PHOTOLUMINESCENT SIGNS

- Standard: In accordance with Photoluminescent Safety Products Association (PSPA) Standard 002, Part 1.
- PSPA material: Class I.
- Manufacturer: Refer to clause 110.
  - Product reference: Refer to clause 110.
- Base material: Plastics sheet.
- Component thickness: 1mm.
- Finish: Reflective.
- Perimeters: Radiused corners.

EXECUTION

610 FIXING SIGNS GENERALLY

- Installation: To BS 559.
  - Secure, plumb and level.
- Fasteners and adhesives: As section Z20.
- Strength of fasteners: Sufficient to support live and dead loads.
- Fasteners for external signs: Corrosion resistant material or with a corrosion resistant finish. Isolate dissimilar metals to avoid electrolytic corrosion.
- Fixings showing on surface of sign: Must not detract from the message being displayed.

COMPLETION

910 DOCUMENTATION

- Submit:
  - Manufacturer's maintenance instructions.
  - Guarantees, warranties, test certificates, record schedules and logbooks.

P
Building fabric sundries

P12
Fire stopping systems

P12 Fire stopping systems

To be read with Preliminaries/ General conditions.

- Inspection body: firestopping installer tfacilitate inspection by accreditation body (FIRAS or LPCB) during and on completion of firestopping works

GENERAL

160A FIRESTOPPING

- Manufacturer: Hilti (Gt Britain) Ltd.1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Acrylic Sealant CFS S ACR (CP 606)
- Colour: White.
- Seal gaps and joints in plasterboard to form an air tight seal using Hilti CFS S ACR (CP 606) joint filler, applied to minimum depth of 6 mm. Provide backing material in the case of larger gaps.
- Tested to DIN EN 1026
- Air Leakage Performance: less than 5m3/hr/m2

SYSTEM PERFORMANCE

210A DESIGN

- Design: Complete the design of the fire stopping system in accordance with manufacturer's recommendations. Design assistance and site support to be provided by chosen supplier by sending a technical specialist/representative to site to assist in design, specification and training.
- Proposals: Submit drawings, technical information, calculations, engineering judgements where required and manufacturer's literature indicating fire performance appropriate to applications, durability, air and smoke tightness performance and where required acoustic performance.

240A FIRE PERFORMANCE OF COMPARTMENT FLOORS

- Resistance to fire:
  - Rating to BS 476-20:1987 to be 30/30 or 60/60 minutes
  - Rating to BS EN 1366-1,-3 to be 30/30 or 60/60 minutes.
- Smoke resistance:
  - Air leakage rate (maximum): 5 m3/hr/m2.

240B FIRE PERFORMANCE OF COMPARTMENT WALLS

- Resistance to fire:
  - Rating to BS 476-20:1987 to be 30/30 or 60/60 minutes
  - Rating to BS EN 1366-1,-3 to be 30/30 or 60/60 minutes.
- Smoke resistance:
  - Air leakage rate (maximum): 5 m3/hr/m2.

260 DESIGN LIFE

- Effective design life: 30 years for Hilti Products.

PRODUCTS

305A PRODUCT CERTIFICATION

- Certification: For products specified generically, submit evidence of compliance with the specification.
- Acceptable evidence:
  - CE marking, Third party Accreditation
  - Test reports and/or assessments by NAMAS approved laboratories. Tests to be representative of end use application.
  - Test reports /assessments by approved laboratories from EU member states. Tests to be representative of end use application.
  - Engineering judgements by manufacturer to be under the terms of the Passive Fire Protection Federation 'Guide to Undertaking assessments in lieu of Fire Tests' and BS 7974 .

340A INTUMESCENT MORTAR

- Manufacturer: Hilti (Gt Britain) Ltd.1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: CP 638 high Strength Compound
- Composition: A fire resistant, gypsum based mortar with thermal insulating properties used to seal medium to very large penetrations and provide load bearing properties . Designed for use in walls and floors, in concrete, porous concrete and masonry.
- Tested: BS 476: Part 20, 1987
- Fire Resistance: 1 - 4 hours
- Colour: Light grey.
- Plastic pipe seals: CP 645 Refer to Clause P12/375A.
- Cable Trunking: Between cables use CP 611A - Refer to clause P12/395A with an Intumescent firestop brick - Refer to clause P12/345A
- Execution: Refer to Clause P12/670A

345A INTUMESCENT PILLOWS

- Manufacturer: Hilti (Gt Britain) Ltd.1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: CP 657
- Sealant: Hilti Firestop Intumescent Sealant CFS-IS (CP 611A) - Refer to P12/395A.
- Colour: Brown.

360A MINERAL WOOL RIGID BATTS

- Manufacturer: Hilti (Gt Britain) Ltd.1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Single/Double Board Seal CFS CT (CP 670)
- Flexi coating: CP 670-C Note on required on high performance seals refer to hilti for advise if required.
- Sealant: CP 606 Refer to P12/160A.
- Plastic pipe seals: CP 645 Refer to P12/375A.
- Colour: White.
- Installation: Refer to P12/710A
- Ready to use fire resistant ablative paint coated mineral wool panels to seal multiple service penetration openings and voids in solid walls and floors and partition walls and to provide an acoustic seal where required.
- Tested to BS 476 Pt 20:1987 and BS EN 1366-3:2004
- CE marked.

360B ROCKWOOL STONE WOOL FIRE STOP BLOCK

- Manufacturer: AIM Ltd.
  - Web: www.aimlimited.co.uk.
  - Email: sales@aimlimited.co.uk.
  - Product reference: Fire Stop Blocks
- Length: To suit Length of Partition if inline with Pocket.

360C ROCKWOOL STONE WOOL FIRE STOP STRIP

- Manufacturer: AIM Ltd.
  - Web: www.aimlimited.co.uk.
  - Email: sales@aimlimited.co.uk.
  - Product reference: Fire Stop Strip

362A CAVITY FIRE BARRIERS TO BS 476-20

- Manufacturer: Hilti (Gt Britain) Ltd, 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  -Web: www.hilti.co.uk
- Product: CP674V Ventilated Cavity Closer
- Requirement: To resist the passage of flame and smoke for not less than 30 minutes minimum
- Intumescent Graphite/Mineral wool based barrier seal fixed with stainless steel brackets.Note: Where shown on AFL Details subject to manufacturers recommendations also refer to NBS P12/390A for seal type.
- To be treated to BS 476-20 modified for ventilated barrier and must resist the passage of fire and smoke for 30 minutes minimum.
- To provide 25 mm air gap for ventilation on installation
- Age tested as defined in the DafStb guidelines, with subsequent fire testing.

362B CAVITY FIRE BARRIERS TO BS 476-20

- Manufacturer: Hilti (Gt Britain) Ltd, 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  -Web: www.hilti.co.uk
- Product: CP674NV Non-Ventilated Cavity Closer
- Requirement: To resist the passage of flame and smoke for not less than 30 minutes minimum
- Mineral wool based barrier seal fixed with stainless steel brackets. Note: Where shown on AFL Details subject to manufacturers recommendations also refer to NBS P12/390A for seal type.
- To be teated to BS 476-20 modified for ventilated barrier and must resist the passage of fire and smoke for 30 minutes minimum.
- Age tested as defined in the DafStb guidelines, with subsequent fire testing.

370A FIRESTOP SLEEVE

- Manufacturer: Hilti (Gt Britain) Ltd. 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: CFS-SL

375A PIPE COLLAR - INSULATED WRAP

- Manufacturer: Hilti (Gt Britain) Ltd. 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: CP 645 Fire Sleeve - 17 to 169 M&E to advise on size required .
- Tested to: BS 476 Pt 20:1987 and EN 1366:3

380A PIPE COLLAR - SURFACE MOUNTED INTUMESCENT

- Manufacturer: Hilti (Gt Britain) Ltd. 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Collar CFS-C (CP 643N)
    Size: Galvanised sheet steel housing containing intumescent material, which foams and expands in a fire to seal flammable pipes ranging in diameter from 32mm to 160 mm with pipe wall thickness from 1.8 to 14.6 mm. PVC, HDPE, ABS, Pneumatic tube conveyors, and pipes with acoustic insulation. To be used on Existing pipe penetrations through solid / partition walls and solid floors if required subject to manufacturers recommendations..
- Tested to BS 476 Pt 20:1987 and EN 1366:3
- Fire resistance: up to 4 hours
- CE marked

380B PIPE COLLAR - SURFACE MOUNTED INTUMESCENT

- Manufacturer: Hilti (Gt Britain) Ltd. 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Collar CFS-CP (CP 644)
    Size: Galvanised sheet steel housing containing intumescent material, which foams and expands in a fire to seal flammable pipes ranging in diameter from 32mm to 250 mm with pipe wall thickness from 1.8 to 22.8 mm. PVC, PP, PE, ABS, Pneumatic tube conveyors, and pipes with acoustic insulation. To be used on Existing pipe penetrations through solid / partition walls and solid floors if required subject to manufacturers recommendations..
- Tested to BS 476 Pt 20:1987 and EN 1366:3
- Fire resistance: up to 4 hours
- CE marked

381A CABLE COLLAR - SURFACE MOUNTED INTUMESCENT

- Manufacturer: Hilti (Gt Britain) Ltd. 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Collar CFS-CC
    Size: Ø108mm can be filled 100% with cables to this diameter. Product to be used on Existing pipe penetrations through solid / partition walls and solid floors if required subject to manufacturers recommendations..
- Tested to ETA-13/0704
- CE marked
- Accessories:
  - Hilti Firestop Filler CFS-FIL - Refer to Manufacturer
  - Hilti Firestop Putty Bandage CFS -P BA - Refer to Clause P12/381B
  - Hilti Cable Collar CFS-CC - Fixing Anchors - Refer to manufacturer for recommendations

381B CABLE WRAP - SURFACE MOUNTED INTUMESCENT

- Manufacturer: Hilti (Gt Britain) Ltd. 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Putty Bandage CFS-P-BA
    Size: 100mm Wide..
- Tested to EN 13501-1 and ETAG 026-2
- CE marked
- Accessories:
  - Mesh - Refer to manufacturer for recommendations

390A SEALANT - FIRE RESISTING SILICONE

- Manufacturer: Hilti (Gt Britain) Ltd.1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Silicone Sealant CFS S SIL (CP 601S)
- Colour: Grey.
- For sealing metal pipe and duct penetrations through solid floors and walls and partition walls particularly where movement accommodation of up to + 25% is required
- Sealant width and thickness to be in accordance with manufacturers written instructions
- Standard: To ISO 11600
- Tested to EN 1366-3
- CE marked

395A SEALANT - ONE-PART FIRE RESISTING ACRYLIC

- Manufacturer: Hilti (Gt Britain) Ltd.1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Intumescent Sealant CFS-IS (CP 611A)
- Colour: Anthracite.
- A gunnable mastic paste for firestopping single and bunched cable penetrations through solid walls and floors and partitions
- Tested to EN 1366-3:2004
- Fire resistance: up to 2 hours
- Age tested as defined in the DafStb guidelines, with subsequent fire testing.
- Acoustically tested

395B SEALANT - ONE-PART FIRE RESISTING ACRYLIC

- Manufacturer: Hilti (Gt Britain) Ltd.1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200
  - Web: www.hilti.co.uk/cfs.
  - Email: gbtas@hilti.com.
  - Product reference: Hilti Firestop Acrylic Sealant CFS-S ACR (CP 606)
- Colour: White.
- Seal metal pipe and duct penetrations through solid walls and floors and partition walls and in low movement connection joints in walls, floors and heads of walls accommodating movement up to +12.5%.
- For sealing movement joints up to 30 mm wide and also at heads of walls in solid walls and floors and partition walls particularly where movement accommodation of up to + 12.5% is required
- Filler width and thickness to be in accordance with manufacturers written instructions
- Tested to EN 1366-3 and 1366-4
- CE marked

EXECUTION

620A WORKMANSHIP GENERALLY

- Standard: Installation by LPCB or FIRAS accredited contractors with a minimum of 3 years experience. Evidence of accreditation to be presented to Main contractor and architect before work commences. Firestop Contractor shall also be able to show that they have undergone Installation training from the manufacturer of the products & systems used.
- Gaps: All gaps and imperfections of fit between building elements and services to provide fire resistance and resist the passage of smoke. All to be in accordance with manufacturer's written instructions
- Labelling: All firestopped service penetrations to be labelled with a unique reference number to aid traceability and must indicate date of installation, date inspected and name of installer.
- Recording of penetration seals: installer to provide records of locations of all Firestop seals and all necessary data for completion of health and safety file
- Adjacent surfaces: Prevent overrun of sealants and mortars onto finished surfaces

670A APPLYING INTUMESCENT MORTAR

- Installers: use trained and 3rd party accredited installers as recommended by manufacturer of mortar
- Sequence: Install mortar after services have been permanently installed, allowing access to remote
  corners. Co-ordinate installation with mechanical and electrical service installers. Dampers to be
  fitted in line with floor or wall, with builders frames and to be held rigidly in position by adequate
  supporting framework
- Base material suitability: Remove loose builders material, degrease and ensure that opening
  bounded by suitable structural elements
- Shuttering: Install suitable shuttering panels to opening, providing adequate support for wet weight of
  mortar
- Support framework: Install support framework as recommended by manufacturer and in accordance
  with said manufacturer's recommendations where required
- Temperature: Do not apply mortar when it could be damaged by frost
- Powder /:water ratio: To manufacturer's recommendations. Contractor to submit proposals and
  manufacturer's written instructions
- Mortar Cure: Do not disturb mortar before final set has taken place
- Load bearing: Only permit foot traffic after curing has taken place and only when manufacturer's
  written evidence has been provided to prove suitability
- Shuttering: Remove combustible shuttering after mortar has cured

710A INSTALLING MINERAL WOOL BATTS

- Installing batts: Fit tight into void between the floor or wall and penetrating services. All cut edges to be coated with appropriate mastic before jointing.
  - Supporting of batts and services: Refer to manufacturer's instruction for suitable support frame where required and fixing details for support of batt and services(eg dampers).
- Face of batts: Flush with the surface of wall, floor or soffit.
- Joints between batts: Close butt joints with appropriate fire resisting sealant, kept to minimum.
- Gaps between services and bulkhead: For non-combustible services seal with appropriate fire resisting sealant. Combustible service's to be sealed with appropriate intumescent sealing product as per manufacturer's recommendations and supporting test evidence

730A FIXING PIPE COLLARS

- Collar fixing: Secured with metal fire rated anchors as recommended by manufacturer.
- Gap around collar: Gap to be between10 and 30 mm and sealed with backing foam and Hilti Firestop Acrylic Sealant CFS S ACR to depth recommended by manufacturer. Wider gaps to be filled with Hilti CP 637 fire rated mortar. Wide gaps can be sealed with Hilti CFS CT fire safety board and Hilti Collars mounted thereafter. Contractor to submit proposals based on manufacturers recommendations..

740A INSERTING SEALANT BACKING MATERIAL

- Preparation: Remove all existing sealing material and treat as new
- Installation: New Joints: Press in manufacturer's recommended backing material to give recess to match required depth of fire rated sealant as listed in manufacturer's written instructions.

745 APPLYING SEALANTS GENERALLY

- Application: As section Z22.

750A APPLYING SEALANT TO JOINTS

- Preparation: De-grease using cleaner recommended by sealant manufacturer.
- Priming: check manufacturer's recommendations and contractor to submit proposals.
- Depth of sealant: Minimum depth is 6mm. Required depth to be obtained from manufacturer and in accordance with written instructions and appropriate for joint width, required fire rating and/or acoustic rating.
- Finishing: Joint to be tooled to ensure correct adhesion to joint sides and to achieve suitable appearance
- Temperature: Do not apply sealants without manufacturer's application temperature recommendations. Water based sealants to be protected from frost

COMPLETION

910A CLEANING

- Masking tapes: All forms of masking and surface protection to be removed
- Cleaning: Clean off splashes and droppings. Wipe down finishes.
- Waste: Off cuts, empty cartridges and general waste from firestopping operations to be disposed of in accordance with site requirements

920A INSPECTION

- Notice for inspection (minimum): 1 calendar week
- Inspection body: firestopping installer to facilitate inspection by accreditation body (FIRAS or LPCB) during and on completion of firestopping works

P20
Unframed isolated trims/ skirtings/ sundry items

P20 Unframed isolated trims/ skirtings/ sundry items

To be read with Preliminaries/ General conditions

105A WALL PROTECTION: TYPE A

- Reference: CHR160 Combination Rail
Colour 002 Gravel (LRV: 53.71)
Fixing: Mechanical (screw) fix – as per manufacturer's instructions
Gradus Detailed Specification
Manufacturer: Gradus Wall Protection, Park Green, Macclesfield, Cheshire, SK11 7LZ.
Tel: 01625 428922 - Website: www.gradus.com - Email: sales@gradus.com
Reference: CHR160 Combination Rail
Cover: PVC-u
Retainer: Aluminium
Accessories: PVC-u – CHR1602 Universal Corner, CHR1604L Left Return, CHR1604R Right Return, CHR1603 Mounting
Bracket (002 Gravel).
Height: 160mm
Depth: 94mm
Length: 4.00m
Colour (002 Gravel (LRV: 53.71)
Fixing: Mechanical (screw) fix – as per manufacturer's instructions
Description
The Gradus CHR160 Combination Rail has a large surface area and is primarily designed to offer direct and indirect protection
against impact from wheeled traffic. The profile also has comfortable grip and thumb groove to provide reassuring pedestrian
support. Modular in design for easy installation and replacement in the event of damage, the CHR160 combination rail
includes a PVC-u cover, aluminium retainer and PVC-u injection moulded accessories. Accessories include reveals to provide
a tight, neat joint and contain an anti-microbial additive to inhibit the growth of bacteria. All PVC-u covers and accessories are
non-reflective, through coloured and textured to conceal the effects of impact and abrasion. The CHR160 Combination Rail can be selected in a contrasting colour to the wall finish to aid movement around a building for
visually impaired people, in line with BS8300:2001+A1:2010 and The Building Regulations 2010 - Approved Document M
guidelines. Light Reflectance Values (LRVs) are detailed above for all colours.

105B WALL PROTECTION TYPE B

Refference WST200N

- Manufacturer: Gradus Wall Protection, Park Green, Macclesfield, Cheshire, SK11 7LZ.
  Tel: 01625 428922 - Website: www.gradus.com - Email: sales@gradus.com

  Reference: PVC-u Wall Strips WST200 (use suffix T for taped, suffix N for un-taped)
  Colour 002 Gravel (LRV: 53.71
  Fixing: Tape or adhesive – as per manufacturer's instructions
  Gradus Detailed Specification
  Manufacturer: Gradus Wall Protection, Park Green, Macclesfield, Cheshire, SK11 7LZ.
  Tel: 01625 428922 - Website: www.gradus.com - Email: sales@gradus.com
  Reference: PVC-u Wall Strips – select from:
  WST200T – 200mm, supplied with tape; WST200N – 200mm, supplied un-taped
  Material: PVC-u – through-coloured and textured
  Length: 4.0m
  Colour 002 Gravel (LRV: 53.71)
  Fixing: Tape or adhesive – as per manufacturer's instructions
  Description
  Gradus Wall Strips are easy to install and versatile PVC-u protection strips that offer medium duty protection against impact,
  abrasion and scrapes. Wall strips can be used along the entire length of a wall or alternatively cut down to use as kickplates
  or pushplates. Available with tape for quick and easy installation or without tape for installing with a suitable adhesive. Wall
  strips are non-reflective, through-coloured and textured to conceal the effects of impact and abrasion. Light Reflectance
  Values (LRVs) are detailed above for all colours.

105C WALL PROTECTION TYPE C

Reference SureProtect Pure Wall Cladding System

Manufacturer: Gradus Wall Protection, Park Green, Macclesfield, Cheshire, SK11 7LZ.
Tel: 01625 428922 Fax: 01625 433939
Website: www.gradusworld.com Email: sales@gradusworld.com
Reference: SureProtect Pure Wall Cladding System
Colour To match Rails
Fixing: Adhesive – as per manufacturers instructions

Gradus Detailed Specification

Manufacturer: Gradus Wall Protection, Park Green, Macclesfield, Cheshire, SK11 7LZ.
Tel: 01625 428922 Fax: 01625 433939
Website: www.gradusworld.com Email: sales@gradusworld.com
Reference: SureProtect Pure Wall Cladding System
Material: PVC-u
Thickness: 2.5mm
Colour To match Rails

Fixing: Adhesive – as per manufacturer's instructions

Description
SureProtect Pure is a smooth PVC-u wall cladding that is impervious to moisture and bacteria. The smooth surface makes it easy to clean and maintain whilst also being resistant to damage caused by everyday impact. SureProtect Pure is available in 16 diverse colours and a range of finishing options depending on application requirements. Thermoformed corners (formed on-site during installation) and welded joints provide a seamless finish for the most hygiene sensitive applications. Silicone sealant, as an alternative finish, is quick to install and creates a smooth transition which is easy to clean. A selection of 1-part and 2-part trims are also available. Trims are easy to install, suitable for most applications and create a smooth transition between junctions.

105D WALL PROTECTION TYPE D

Reference High Impact PVC-u Corner Guards – select from CGH5090

Manufacturer: Gradus, Park Green, Macclesfield, Cheshire, SK11 7LZ.
Tel: 01625 428922 - Website: www.gradus.com - Email: sales@gradus.com
Reference: High Impact PVC-u Corner Guards – select from CGH5090
Colour 002 Gravel (LRV: 53.71)
Fixing: Mechanical (screw) fix – as per manufacturer's instructions
Gradus Detailed Specification
Manufacturer: Gradus, Park Green, Macclesfield, Cheshire, SK11 7LZ.
Tel: 01625 428922 - Website: www.gradus.com - Email: sales@gradus.com
Reference: High Impact PVC-u Corner Guards – select from:
CGH5090 – 50mm wing, 90° angle
Cover: PVC-u
Retainer: Aluminium
Accessories: PVC-u Top & Bottom Caps (product codes: CGH5090CAP, CGH7590CAP and CGH75135CAP)
Length (select as required): 0.8m, 1.0m, 1.3m, 2.0m or 4.0m
Colour 002 Gravel (LRV: 53.71)
Fixing: Mechanical (screw) fix – as per manufacturer's instructions
Description
Gradus High Impact PVC-u Corner Guards provide heavy duty protection against impact from wheeled traffic. They are modular in design for easy installation and replacement in the event of damage and comprise a replaceable PVC-u cover, an aluminium retainer and top / bottom caps. All PVC-u covers and accessories are non-reflective, through coloured and textured to conceal the effects of impacts and abrasion. Corner guards can be selected in a contrasting colour to the wall finish for corner identification in areas used by visually impaired people, in line with BS8300:2009+A1:2010 and The Building Regulations 2010 - Approved Document M guidelines. Light Reflectance Values (LRVs) are detailed above for all colours.

105E WALL PROTECTION TYPE E

Reference BHPA100 Bed Head Protector

- Manufacturer: Gradus Wall Protection, Park Green, Macclesfield, Cheshire, SK11 7LZ.
  Tel: 01625 428922 - Website: www.gradus.com - Email: sales@gradus.com
  Reference: BHPA100 Bed Head Protector
  Colour 002 Gravel (LRV: 53.71)
  Fixing: Mechanical (screw) fix – as per manufacturer's instructions
  Gradus Detailed Specification
  Manufacturer: Gradus Wall Protection, Park Green, Macclesfield, Cheshire, SK11 7LZ.
  Tel: 01625 428922 - Website: www.gradus.com - Email: sales@gradus.com
  Reference: BHPA100 Bed Head Protector
  Cover: PVC-u
  Retainer: Aluminium
  End Caps: PVC-u
  Width: 100mm (each unit)
  Depth: 50mm (extender bracket options available)
  Length: 750mm
  Colour 002 Gravel (LRV: 53.71)
  Fixing: Mechanical (screw) fix – as per manufacturer's instructions
  Description
  The Gradus BHPA100 Bed Head Protector is designed to prevent damage to walls and wall mounted equipment from beds
  that are frequently moved around, elevated or inclined. The BHPA100 is supplied as a pre-cut packaged system for ease of
  installation. Package comprises a pair of pre-cut aluminium retainers, PVC-u covers and colour-matched PVC-u end caps. End
  caps include reveals to provide a tight, neat joint and contain an anti-microbial additive to inhibit the growth of bacteria. All
  PVC-u covers and accessories are non-reflective, through-coloured and textured to conceal the effects of impact and abrasion.
  Light Reflectance Values (LRVs) are detailed above for all colours.

106A AS BUILT CLEANING AND MAINTENANCE GRADUS PRODUCTS

- Prodducts: Clauses 105A, 105B, 105C, 105D, 105E
- Maintenance Programme
  A regular scheduled maintenance programme should be employed to prevent the build-up of dirt and grease, which will detract from the overall appearance of the product and can lead to the spread of germs and bacteria.
  Apply cleaner to a micro fibre cloth and wipe the surface of the profile. When cleaning handrails, particular attention should be paid to the underside of the handrail as this is where dirt and grease can build up.
  The cleaned surface should then be 'rinse wiped' using clean water and then thoroughly dried using a soft cloth. This ensures all cleaning residue is removed.
  Abrasive cleaners, solvents or cleaning pads should NOT be used as they will damage the profile surface.
- Recommended Cleaning Products for Gradus InPro PVC-u Profiles
  Gradus has worked with Selden Research to undertake extensive testing on Gradus InPro profiles and as a result, a range of cleaning products has been recommended for use with Gradus profiles in a variety of environments.
  The cleaning products listed below are suitable for all Gradus InPro PVC-u profiles including handrails, combi-rails, wall guards, Armaclad, bed protectors, corner guards and Sanparrel sheet
  For further information about these cleaning products, including environment suitability, instructions for use and MSDS data sheets, please contact:
  Selden Research Limited, Staden Business Park, Staden Lane, Buxton, Derbyshire, SK17 9RZ.
  Tel: 01298 26226
  Email: gradus@selden.co.uk
  Web: www.selden.co.uk

Product Description	Name of Cleaner	Code	Uses
Bactericidal, virucidal and fungicidal products	Selgiene Ultra (RTU)	T066	Hospitals, schools and any environment that requires a hygienic surface
Bactericidal, virucidal and fungicidal concentrated products	Selgiene Ultra	C066	Hospitals, schools and any environment that requires a hygienic surface
High care cleaner sanitizer	Selgiene Extreme	T500	Hospitals, schools and any environment that requires a hygienic surface
High care cleaner sanitizer	Selgiene Extreme	C500	Hospitals, schools and any environment that requires a hygienic surface
For the removal of graffiti from plastic surfaces	Graffiti Remover	T018/K175	All environments where graffiti is a problem

110 SOFTWOOD WINDOW SILLS

- Quality of wood and fixing: To BS 1186-3.
  - Species: Contractor's choice.
  - Class: 1.
- Moisture content at time of fixing: 9-13%.
- Preservative treatment: Water-based microemulsion as section Z12, service life 30 years.
- Fire rating: Not applicable.
- Profile: Bullnosed.
  - Finished size: Site measure each window.
- Finish as delivered: Prepared and primed, as section M60.
- Fixing: Plugged, screwed and pelleted at 300mm Max centres.

200A MEDIUM DENSITY FIBREBOARD Window Boards

- Manufacturer: Norbord Europe Ltd.
  - Web: www.norbord.co.uk.
  - Email: info@norbord.net.
  - Product reference: Caberwood MDF
- Grade: Moisture Resistant.
- Thickness: 18 mm.
- Size: Contractors choice..
- Other: Laminated faced / rounded edge also to be covered
- Colour: White

EXECUTION

510 INSTALLATION GENERALLY

- Joinery workmanship: As section Z10.
- Metal workmanship: As section Z11.
- Methods of fixing and fasteners: As section Z20 where not specified.
- Straight runs: To be in one piece, or in long lengths with as few joints as possible.
- Running joints: Location and method of forming to be agreed where not detailed.
- Joints at angles: Mitre, unless shown otherwise.
- Position and level: To be agreed where not detailed.

P21
Door/ window ironmongery

P21 Door/ window ironmongery

GENERAL

120A

IRONMONGERY RANGES:
Unless specified otherwise, select ironmongery from one coordinated range so far as possible. Where particular items are unavailable within the range, alternatives compatible in performance, design, style, material, colour and finish may be submitted for approval.

Fortis range of ironmongery compromising: Door stops and closers, Grab rails, Handles, Sundries, Pull Handles & Signage all sourced from a Proprietary Single Ironmongery Range obtained from European Doorsets as part of a global fire assessment for door sets and ironmongery.

Contact: European Doorsets, Langley Road, Burscough Industrial Estate, Ormskirk, Lancashire, L40 8JR. Tel 01704 894 999

170A IRONMONGERY FOR FIRE DOORS

unless specified otherwise, select ironmongery to comply with the recommendations of the Guild of Architectural Ironmongers and Association of Builders' Hardware Manufacturers Code of practice
'Hardware essential to the optimum performance of fire resisting door sets'.

DOOR HANGING DEVICES

310A HINGES:
For use on fire and smoke compartmentation doors and escape route doors, when fitted in accordance with the manufacturer's fitting instructions
Tested to BS EN 1935:2002 Grade 14
CE Marked and Certifire Approved
Low Maintenance, Self-Lubricating Hinge
160kg Maximum door weight
Radius Profile
Fortis Product Range Ref: EDS.110.014.01 as supplied by European Door Sets Ltd

DOOR OPERATING DEVICES

410A OVERHEAD DOOR CLOSERS FOR FIRE DOORS____

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Comply with the mechanical performance requirements of BS 6459:Part 1.
For use on fire and smoke compartmentation doors, when fitted in accordance with the manufacturer's fitting instructions.
Tested to BS EN 1154
CE Marked and Certifire approved
Be fixed on the opening face of the door unless specified otherwise.
Universal application – Fig1,6 & 61
Provides easy access Under BS 8300 Guidelines
Adjustable backcheck by valve
Latching speed control by valve
Close positively against smoke seals where fitted.
Fortis Product Ref: EDS.75.5225.01 as supplied by European Door Sets Ltd

OVERHEAD GUIDE RAIL CAM CLOSERS FOR FIRE DOORS:
Comply with the mechanical performance requirements of BS 6459:Part 1.
For use on fire and smoke compartmentation doors, when fitted in accordance with the manufacturer's fitting instructions.
Tested to BS EN 1154
CE Marked and Certifire approved
Be fixed on the opening face of the door unless specified otherwise.
Provides easy access Under BS 8300 Guidelines
Universal application
Include adjustable backcheck by valve
Latching Speed control by valve
1100mm maximum opening width
Close positively against smoke seals where fitted.
Have arms of iron, steel or other metal with melting point not less than 800 degC.
Fortis Product Ref: EDS.01.3000.10 as supplied by European Door Sets Ltd

450A FLOOR SPRINGS

Must comply with the mechanical performance requirements of BS 6459:Part 1
For use on fire and smoke compartmentation doors, when fitted in accordance with the manufacturer's fitting instructions
Tested to BS EN 1154
CE Marked and Certifire approved
Be matched to the sizes and weights of doors
Override latches and/or door seals when fitted
Include Adjustable Power sizing by valve
Include Adjust bake backcheck by valve
Lateral Adjustment to Door shoe
Hold unlatched doors shut under normal working conditions.
Fortis Product Ref: EDS.01.500.01 as supplied by European Door Sets Ltd

ELECTRO HOLD OPEN FLOOR SPRINGS GENERALLY:

Must comply with the mechanical performance requirements of BS 6459:Part 1
Door closer with integrated electrically operated hold-open mechanism for use on fire and/or smoke protection doors or on emergency exits
Tested to BS EN 1155
CE Marked and Certifire approved
Be matched to the sizes and weights of doors
Override latches and/or door seals when fitted
Include Adjustable Power sizing by valve
Include Adjust bake backcheck by valve
Hold unlatched doors shut under normal working conditions.
Fortis Product Ref: EDS.01.500.01 as supplied by European Door Sets Ltd

471A ELECTRO OVERHEAD CLOSERS FOR FIRE DOORS

Comply with the mechanical performance requirements of BS 6459:Part 1.
For use on fire and smoke compartmentation doors, when fitted in accordance with the manufacturer's fitting instructions.
Tested to BS EN 1155
CE Marked and Certifire approved
Be fixed on the opening face of the door unless specified otherwise.
Latching speed control by valve
Close positively against smoke seals where fitted.
Fortis Product Ref: EDS.01.1114E.01 as supplied by European Door Sets Ltd

DOOR SECURING DEVICES

510A THIEF RESISTANT DOOR LOCKS

All locks to be supplied under client's grand master suiting programme
Successfully tested to: EN1303:2005 & TS007 c/w Kitemark Anti Manipulation Test to BS3621:2007
1* and 3* rated where applicable
6 Pin system
To include Anti Bump Protection, Anti Pick protection

Classroom function and Barricade function to be supplied were applicable
Fortis Product Ref: 04.113.05.Clas as supplied by European Door Sets Ltd

515A LOCKS/LATCHES FOR FIRE RESISTING DOORS LOCKS_____

For use on fire and smoke compartmentation doors, when fitted in accordance with the manufacturer's fitting instructions
Must not compromise the fire performance of the door and must be approved for the purpose by the door leaf manufacturer, and include all appropriate Intumescent during fire testing
Components critical to the retention of the door in a closed position must not have a melting point lower than 800 degC.
Tested to BS EN 12209 2003
CE Marked and Certifire approved
85mm Case SIze
60mm Backset
Radius Profile - 22mm SS304 Forend
SS304 Latchbolt & Deadbolt
Anti-Rattle Strike
Grip Tight Follower
Fortis Product Re: EDS.110.din.72.01 as provided by European Door Sets Ltd

550 LOCKSLOCKS/LATCHES FOR FIRE RESISTING DOORS

Must not compromise the fire performance of the door and must be approved for the purpose by the door leaf manufacturer, and include all appropriate Intumescent to during fire testing

Components critical to the retention of the door in a closed position must not have a melting point lower than 800 degC.

All fire rated material to be supplied appropriate to door set rating

577A EMERGENCY EXIT DEVICES FOR FIRE DOORS

For use on fire and smoke compartmentation doors, when fitted in accordance with the manufacturer's fitting instructions

Must not compromise the fire performance of the door and must be approved for the purpose by the door leaf manufacturer, and include all appropriate Intumescent during fire testing
Tested to BS EN 1125:2008

CE Marked and Certifire approved
Non Handed emergency panic bolt with vertical and horizontal pullman latches

Fortis Product Ref: 19.403.10 as supplied by European Door Sets Ltd

582A DOOR BOLTS

To match door furniture and sized to suit height, weight and function of door.

To secure the first closing leaf on double doors

Include all appropriate Intumescent as included during door set fire testing

Grade 304 Satin stainless Steel Finish

Forts Product Ref: EDS.23.055.01 as supplied by European Door Sets Ltd

FLOOR SOCKETS

Floor sockets to be supplied to all bolts

Satin Stainless Steel

Sprung loaded Dust excluding type

Forts Product Ref: EDS.99.0600.01 as supplied by European Door Sets Ltd

586A PRIVACY LOCKS

Satin Stainless Steel
Concealed and Visible sets
With bolt through fixings to steel lugs
With clip on cover rose
Large Disabled user type
Include release and Indicator
Fortis Product Ref: 00.005.01 as supplied by European Door Sets Ltd

DOOR FURNITURE

610A LEVER HANDLES

EN BS 1906 Grade 3

Satin stainless Steel

8mm Heavy Duty Heso spindle fixing
Bearing rose
Fully concealed bolt through lug fixing with clip on cover roses

Meets the dimensional requirements under BS8300 Guide lines
Fortis Product Ref: 00.5064.01 as supplied by European Door Sets Ltd

640 OBLIGATORY DOOR SIGNS

Conform to BS EN 5499
Satin Stainless Steel
Screw fixing 76 mm disc
Fortis Product Ref: EDS.23.0700.01 as supplied by European Door Sets Ltd

640A PICTOGRAM SIGNS

International Toilet pictograms designs
Satin Stainless Steel
Screw fixing 76 mm disc
Fortis Product Ref: EDS.23.0707.01 as supplied by European Door Sets Ltd

641A PULL HANDLES

Satin Stainless Steel

Size 350 x 19 mm

Fortis Product Ref: 00.5750.350.01 as supplied by European Door Sets Ltd

670A PUSH PLATES

Satin Stainless Steel Pushplate
16 Gauge Screw fixing
Sized 75x350mm to suit bolt through pull handle
Fortis Product Ref: EDS.07.0500.01 01 as supplied by European Door Sets Ltd

680A MIDRAIL PLATES

- Satin Stainless Steel Kickplate
16 Gauge Screw fixing
Sized 200mm high to suit width of door leaf
Fortis Product Ref: EDS.06.150M.01 as supplied by European Door Sets Ltd

690A KICKPLATES

Satin Stainless Steel Kickplate
16 Gauge Screw fixing
Sized 400mm high to suit width of door leaf
Fortis Product Ref: EDS.07.0400.01 01 by European Door Sets Ltd

710A ESCUTCHEONS

Satin Stainless Steel
Concealed and Visible sets
With bolt through fixings to steel lugs
With clip on cover rose
Fortis Product Ref: 05.0613.01 01 as supplied by European Door Sets Ltd

720A STOPS

Unless specified otherwise, are required for doors opening against walls other than those fitted with closers with a back check facility.
Satin stainless Steel
Heavy Duty with two point secure fixing
Fortis Product Ref: EDS.23.1032.01 as supplied by European Door Sets Ltd

901 SET IRONMONGERY PACKS Refer to European Door Sets Quotation & AFL 32 series Door Pacakge Drawings/ Schedules for Information

Noted in European Door Sets Quotation being used:

Reference:

01-D-D/S

02-D-F30

02-L/H-F30

02-S-F30

02-S-WC

03-D-F30

04-S-F30

05-L/H-D/S

05-L/H-SHO

06-S-ENS

07-D-EHO

08-L/H-NFR

09-D-F30

P31
Holes, chases, covers and supports for services

P31 Holes, chases, covers and supports for services

To be read with Preliminaries/ General conditions.

PRODUCTS

300A FLOOR DUCTING/ TRUNKING
- Manufacturer: As recommended by Equipment installer.
  - Product reference: As recommended by Equipment installer.
- Sizes: (as indicated on Equipment installer installation drawings) mm.
- Fixing: Pack ducting/trunking level and true before screeding.
  - Fixing method: As recommended by trunking manufacturer.
  - Floor finish: Vinyl sheet floor finish fitted to covers and against sides of base profile, refer to
    Floor Finishes drawings XX-GF-DR-I-43101 inclusive for types.
- Jointing: As recommended by trunking manufacturer to achieve aseptic conditions.
- Accessories/Special requirements: All junctions of flooring/trunking to be hot air welded. All joints to
  be sealant pointed to CA direction/approval.

370A ACCESS COVERS/ GRATINGS
- Refer Mech and Elec Engineering consultants drawings.

400A METER CABINETS
- Refer Mech and Elec Engineering consultants drawings.

EXECUTION

610 COORDINATION
- Locations and dimensions of holes and chases for services: Submit details prior to start of operations
  on site..

620 HOLES, RECESSES AND CHASES IN IN SITU CONCRETE
- Cast in: Holes larger than 10 mm diameter, recesses and chases.
- Cutting and drilling:
  - Permitted for holes not larger than 10 mm diameter.
  - Not permitted for holes larger than 10 mm diameter except as indicated on drawings.

630 HOLES, RECESSES AND CHASES IN PRECAST CONCRETE
- Cutting and drilling: Not permitted except as indicated on drawings.

640 HOLES IN STRUCTURAL STEELWORK
- Cutting and drilling: Not permitted except as indicated on drawings.

650 HOLES, RECESSES AND CHASES IN MASONRY

- Locations: To maintain integrity of strength, stability and sound resistance of construction.
- Sizes: Minimum needed to accommodate services.
  - Holes (maximum): 300 mm².
- Walls of hollow or cellular blocks: Do not chase.
- Walls of other materials:
  - Vertical chases: No deeper than one third of single leaf thickness, excluding finishes.
  - Horizontal or raking chases: No longer than 1 m. No deeper than one sixth of the single leaf thickness, excluding finishes.
- Chases and recesses: Do not set back to back. Offset by a clear distance at least equal to the wall thickness.
- Cutting: Do not cut until mortar is fully set. Cut carefully and neatly. Avoid spalling, cracking and other damage to surrounding structure.

690 INSTALLING PIPE SLEEVES

- Sleeves: Fit to pipes passing through building fabric.
- Material: Match pipeline.
- Size: One or two sizes larger than pipe to allow clearance.
- Finish: Install sleeves flush with building finish. In areas where floors are washed down, install protruding 100 mm above floor finish.
- Masking plates: Fit at visible penetrations, including through false ceilings of occupied rooms.

R
Disposal systems

R11
Above ground foul drainage systems

R11 Above ground foul drainage systems

To be read with Preliminaries/ General conditions.

GENERAL

115 ABOVE GROUND FOUL DRAINAGE SYSTEM
- Sanitary and floor drainage outlets: Floor drains.
- Waste pipework: Submit proposals.
- Discharge stack and branch pipework: Submit proposals.
- Separate ventilating pipework: Plastics.
- Accessories: tbc.
- Disposal: Submit proposals.

SYSTEM PERFORMANCE

210 DESIGN
- Design: Complete the design of the above ground foul drainage system.
- Standards: To BS EN 12056-1 and BS EN 12056-2, and in accordance with BS EN 12056-2 National Annexes NA-NG.
  - System type to BS EN 12056-2: System III.
- Proposals: Submit drawings, technical information, calculations and manufacturers' literature.

220 COLLECTION AND DISTRIBUTION OF FOUL WATER
- General: Quick, quiet and complete, self-cleansing in normal use, without blockage, crossflow, backfall, leakage, odours, noise nuisance or risk to health.
- Pressure fluctuations in pipework (maximum): ±38 mm water gauge.
- Water seal retained in traps (minimum): 25 mm.

PRODUCTS

315 FLOOR DRAINS IN SHOWERS
- Manufacturer: Wade International Ltd., Third Avenue, Halstead, Essex CO9 2SX, United Kingdom
  Tel: +44 (0)1787 475151, Fax: +44 (0)1787 475579, Web: www.wade.eu, Email: sales@wade.eu or equal.
  - Product reference: GV6107 Trapped Shower Gully with Vertical Outlet .
- Floor finish: Flexible sheet.
- Body type: Bell trapped.
  - Material: Stainless steel.
- Grating/ cover:
  - Type: Flat, slotted.
  - Material: Stainless steel, screw fixed.
- Outlet: Type and direction to suit pipework.
- Accessories: Reduction connector to 50mm diameter.

EXECUTION

601 INSTALLATION GENERALLY

- Standard: To BS EN 12056-5.
- Components: From the same manufacturer for each type of pipework.
- Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
- Plastics and galvanized steel pipes: Do not bend.
- Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
- Concealed or inaccessible surfaces: Decorate before starting work specified in this section.
- Protection:
  - Purpose made temporary caps: Fit to prevent ingress of debris.
  - Access covers, cleaning eyes and blanking plates: Fit as the work proceeds.

605 PIPE ROUTES

- General: The shortest practical, with as few bends as possible.
  - Bends in wet portion of soil stacks: Not permitted.
  - Routes not shown on drawings: Submit proposals before commencing work.

610 FIXING PIPEWORK

- Pipework: Fix securely plumb and/ or true to line. Fix discharge stack pipes at or close below socket collar or coupling.
- Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.
- Externally socketed pipes and fittings: Fix with sockets facing upstream.
- Additional supports: Provide as necessary to support junctions and changes in direction.
- Vertical pipes: Provide a load bearing support not less than every storey level. Tighten fixings as work proceeds so that every storey is self supporting.
- Wall and floor penetrations: Isolate pipework from structure, e.g. with pipe sleeves.
  - Masking plates: Fix at penetrations if visible in the finished work.
- Expansion joint sockets: Fix rigidly to the building.
- Fixings: Allow the pipe to slide.

COMPLETION

905 PIPEWORK AIRTIGHTNESS TEST

- Preparation:
  - Open ends of pipework: Temporarily seal using plugs.
  - Test apparatus: Connect a 'U' tube water gauge and air pump to pipework via a plug or through trap of an appliance.
- Testing: Pump air into pipework until gauge registers 38 mm.
- Required performance: Pressure of 38 mm is to be maintained without loss for at least three minutes.

915 PREHANDOVER CHECKS

- Temporary caps: Remove.
- Permanent blanking caps, access covers, rodding eyes, floor gratings and the like: Secure complete with fixings.

920 SUBMITTALS

- Manufacturer's instructions for grease traps: Handover at completion.

Z
Building fabric reference specification

Z10
Purpose made joinery

Z10 Purpose made joinery

To be read with Preliminaries/ General conditions.

110 FABRICATION

- Standard: To BS 1186-2.
- Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
  - Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
- Joints: Tight and close fitting.
- Assembled components: Rigid. Free from distortion.
- Screws: Provide pilot holes.
  - Screws of 8 gauge (4 mm diameter) or more and screws into hardwood: Provide clearance holes.
  - Countersink screws: Heads sunk at least 2 mm below surfaces visible in completed work.
- Adhesives: Compatible with wood preservatives applied and end uses of timber.

120 CROSS SECTION DIMENSIONS OF TIMBER

- General: Dimensions on drawings are finished sizes.
- Maximum permitted deviations from finished sizes:
  - Softwood sections: To BS EN 1313-1:-
    Clause 6 for sawn sections.
  - Hardwood sections: To BS EN 1313-2:-
    Clause 6 for sawn sections.
    Clause NA.3 for further processed sections.

130 PRESERVATIVE TREATED WOOD

- Cutting and machining: Completed as far as possible before treatment.
- Extensively processed timber: Retreat timber sawn lengthways, thicknessed, planed, ploughed, etc.
- Surfaces exposed by minor cutting and/ or drilling: Treat as recommended by main treatment solution manufacturer.

140 MOISTURE CONTENT

- Wood and wood based products: Maintained within range specified for the component during manufacture and storage.

210 LAMINATED PLASTICS VENEERED BOARDS/ PANELS

- Fabrication: To British Laminated Plastics Fabricators Association Ltd (BLF) fabricating standards.
- Balancing veneer: From decorative veneer manufacturer and of similar composition. Applied to reverse side of core material.
- Finished components: Free from defects, including bow, twist, scratches, chipping, cracks, pimpling, indentations, glue marks, staining and variations in colour and pattern.
- Joints visible in completed work: Tight butted, true and flush.

220 WOOD VENEERED BOARDS/ PANELS

- Core material and veneers: Conditioned before bonding.
- Setting out: Veneer features and grain pattern aligned regularly and symmetrically unless instructed otherwise.
- Balancing veneer: Applied to reverse side of core material.
  - Moisture and temperature movement characteristics: As facing veneer.
- Veneer edges: Tight butted and flush, with no gaps.
- Tolerance of veneer thickness (maximum): ± 0.5 mm.
- Finished components: Free from defects, including bow, twist, scratches, chipping, splits, blebs, indentations, glue marks and staining.
- Surface finish: Fine, smooth, free from sanding marks.

250 FINISHING

- Surfaces: Smooth, even and suitable to receive finishes.
  - Arrises: Eased unless shown otherwise on drawings.
- End grain in external components: Sealed with primer or sealer as section M60 and allowed to dry before assembly.

Z11
Purpose made metalwork

Z11 Purpose made metalwork

To be read with Preliminaries/ General conditions.

310 MATERIALS GENERALLY

- Grades of metals, section dimensions and properties: To appropriate British Standards. When not specified, select grades and sections appropriate for the purpose.
- Prefinished metal: May be used if methods of fabrication do not damage or alter appearance of finish, and finish is adequately protected.
- Fasteners: To appropriate British Standards and, unless specified otherwise, of same metal as component being fastened, with matching coating or finish.

320 STEEL LONG AND FLAT PRODUCTS

- Hot rolled structural steels (excluding structural hollow sections and tubes): To BS EN 10025-1.
- Fine grain steels, including special steels: To BS EN 10025-3 and -4.
- Steels with improved atmospheric corrosion resistance: To BS EN 10025-5.

330 STEEL PLATE, SHEET AND STRIP

- Plates and wide flats, high yield strength steel: To BS EN 10025-6.

360 COATED STEEL FLAT PRODUCTS

- Hot dip zinc coated carbon steel sheet and strip for cold forming: To BS EN 10346 and BS EN 10143.
- Hot dip zinc coated structural steel sheet and strip: To BS EN 10143 and BS EN 10346.
- Hot dip zinc-aluminium (za) coated sheet and strip: To BS EN 10346.
- Hot dip aluminium-zinc (az) coated sheet and strip: To BS EN 10346.
- Organic coated flat products: To BS EN 10169.

380 OTHER STEEL SECTIONS

- Equal flange tees: To BS EN 10055.
- Equal and unequal angles: To BS EN 10056-1 and -2.
- Wire, carbon steel for general engineering purposes: To BS 1052.
- Wire and wire products, general: To BS EN 10218-2.
- Tubes:
  - Seamless circular: To BS EN 10297-1.
  - Seamless cold drawn: To BS EN 10305-1.
  - Welded and cold sized square and rectangular: To BS EN 10305-5.
  - Welded circular: To BS EN 10296-1.
  - Welded cold drawn: To BS EN 10305-2.
  - Welded cold sized: To BS EN 10305-3.

400 STAINLESS STEEL PRODUCTS

- Chemical composition and physical properties: To BS EN 10088-1.
- Sheet, strip and plate: To BS EN 10088-2.
- Semi-finished products bars, rods and sections: To BS EN 10088-3.
- Wire: To BS EN 1088-3.
- Tubes:
  - Welded circular: To BS EN 10296-2.
  - Seamless circular: To BS EN 10297-2.

410 ALUMINIUM ALLOY PRODUCTS

- Designations:
  - Designation system, chemical composition and forms: To BS EN 573-1, -2, -3 and -5.
  - Temper designations: To BS EN 515.
- Sheet, strip and plate: To BS EN 485-1 to -4.
- Cold drawn rods, bars and tubes: To BS EN 754-1 and -2.
- Extruded rods, bars, tubes and profiles: To BS EN 755-1 and -2.
- Drawn wire: To BS EN 1301-1, -2 and -3.
- Rivet, bolt and screw stock: To BS 1473.
- Structural sections: To BS 1161.

420 COPPER ALLOY PRODUCTS

- Sheet, strip, plate and circles for general purposes: To BS EN 1652.
- Sheet and strip for building purposes: To BS EN 1172.
- Rods: To BS EN 12163.
- Profiles and rectangular bars: To BS EN 12167.
- Wire: To BS EN 12166.
- Tubes: To BS EN 12449.

FABRICATION

515 FABRICATION GENERALLY

- Contact between dissimilar metals in components: Avoid.
- Finished components: Rigid and free from distortion, cracks, burrs and sharp arrises.
  - Moving parts: Free moving without binding.
- Corner junctions of identical sections: Mitre.

520 COLD FORMED WORK

- Profiles: Accurate, with straight arrises.

525 ADHESIVE BONDING

- Preparation of surfaces of metals to receive adhesives:
  - Degrease.
  - Abrade mechanically or chemically etch.
  - Prime: To suit adhesive.
- Adhesive bond: Form under pressure.

527 WELDING GENERALLY.

- Welding procedures:
  - Method and standard:
    Metal arc welding to BS EN 1011-1 and -2 (suitable for welding steel).
    TIG welding to BS EN 1011-3 (suitable for welding stainless steel).
    TIG or MIG welding to BS EN 1011-4 (suitable for welding aluminium alloys). .
  - Welding Procedure Specification (WPS): Not required.
- Preparation:
  - Joint preparation: Clean thoroughly.
  - Surfaces of materials that will be self-finished and visible in the completed work: protect from weld splatter.
- Jointing:
  - Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks.
  - Dissimilar metals: Welding not permitted.
  - Strength requirements: Welds to achieve design loads.
  - Heat straightening: Not permitted.
  - Complex assemblies: Agree priority for welding members to minimize distortion caused by subsequent welds.
  - Tack welds: Use only for temporary attachment.
  - Jigs: Provide to support and restrain members during welding.
  - Filler plates: Submit proposals.
  - Lap joints: Minimum 5 x metal thickness or 25 mm, whichever is greater.
  - Weld terminations: Clean and sound.

530 STAINLESS STEEL FABRICATION

- Guillotining or punching: Do not use for metal thicknesses greater that 10 mm.
- Thermal cutting:
  - Carbonation in the heat affected zone: Remove, after cutting.
- Bending:
  - Plates or bars: Cold bending radius not less than material thickness.
  - Tubes: Cold bending radius not less than 2 x tube diameter.
- Welding: In addition to general welding requirements:
  - Protect adjacent surfaces from weld spatter.
  - Pickle all welds before post fabrication treatments.
- Protection: Provide protection to fabricated components during transit and on site.

FINISHING

745 PREPARATION FOR APPLICATION OF COATINGS

- General: Complete fabrication, and drill fixing holes before applying coatings.
- Paint, grease, flux, rust, burrs and sharp arrises: Remove.

750 LIQUID ORGANIC COATING FOR ALUMINIUM ALLOY COMPONENTS

- Standard: To BS 4842.

780 GALVANIZING

- Standard: To BS EN ISO 1461.
- Preparation:
  - Vent and drain holes: Provide in accordance with BS EN ISO 14713-1 and -2. Seal after sections have been drained and cooled.
  - Components subjected to cold working stresses: Heat treat to relieve stresses before galvanizing.
  - Welding slag: Remove.
  - Component cleaning: To BS EN ISO 8501-3.
  - Grade: St 2½.

COMPLETION

910 DOCUMENTATION

- Submit:
  - Manufacturer's maintenance instructions.
  - Guarantees, warranties, test certificates, record schedules and log books.

920 COMPLETION

- Protection: Remove.
- Cleaning and maintenance: Carry out in accordance with procedures detailed in fabricators' guarantees.

Z12
Preservative/ fire retardant treatment

Z12 Preservative/ fire retardant treatment

To be read with Preliminaries/ General conditions.

110 TREATMENT APPLICATION
- Timing: After cutting and machining timber, and before assembling components.
- Processor: Licensed by manufacturer of specified treatment solution.
  - Operatives: WPA certified.
- Certification: For each batch of timber provide a certificate of assurance that treatment has been carried out as specified.

120 COMMODITY SPECIFICATIONS
- Standard: Current edition of the Wood Protection Association (WPA) publication 'Industrial wood preservation specification and practice'.

130 PRESERVATIVE TREATMENT SOLUTION STRENGTHS/ TREATMENT CYCLES
- General: Select to achieve specified service life and to suit treatability of specified wood species.

165 WATER-BASED MICROEMULSION PRESERVATIVE TREATMENT
- Solution:
  - Manufacturer: Contractor's choice.
    Product reference: Submit proposals.
  - Application: Double vacuum + low pressure impregnation.
- Moisture content of wood:
  - At time of treatment: As specified for the timber/ component at time of fixing.
  - After treatment: Timber to be surface dry before use.

167 BORON COMPOUND PRESERVATIVE TREATMENT
- Solution:
  - Manufacturer: Contractor's choice.
    Product reference: Submit proposals.
  - Application: High pressure impregnation.
- Moisture content of wood:
  - At time of treatment: Not more than 28%.
  - After treatment: Timber to be surface dry before using.

180 RECYCLED TIMBER CONTAINING CREOSOTE OR CHROMIUM/ ARSENIC BASED PRESERVATIVE
- Usage: Not permitted.

210 FIRE RETARDANT TREATMENT
- Solution type: Dry interior.
  - Manufacturer: Contractor's choice.
    Product reference: Submit proposals.
  - Application: Vacuum + pressure impregnation.
- Moisture content of wood:
  - At time of treatment: As specified for the timber/ component at time of fixing.
  - After treatment: Timber to be redried slowly at temperatures not exceeding 65°C to minimize distortion and degradation.

610 MAKING GOOD TO PRESERVATIVE TREATMENT ON-SITE

- Preservative solution: Compatible with off-site treatment.
- Application: In accordance with preservative manufacturer's recommendations.

620 MAKING GOOD TO FIRE RETARDANT TREATMENT ON-SITE

- Fire retardant: Compatible with off-site treatment.
- Application: In accordance with fire retardant manufacturer's recommendations.

Z20
Fixings and adhesives

Z20 Fixings and adhesives

To be read with Preliminaries/ General conditions.

PRODUCTS

310 FASTENERS GENERALLY
- Materials: To have:
  - Bimetallic corrosion resistance appropriate to items being fixed.
  - Atmospheric corrosion resistance appropriate to fixing location.
- Appearance: Submit samples on request.

320 PACKINGS
- Materials: Noncompressible, corrosion proof.
- Area of packings: Sufficient to transfer loads.

330 NAILED TIMBER FASTENERS
- Nails:
  - Steel: To BS 1202-1 or BS EN 10230-1.
  - Copper: To BS EN 1202-2.
  - Aluminium: To BS 1202-3.

340 MASONRY FIXINGS
- Light duty: Plugs and screws.
- Heavy duty: Expansion anchors or chemical anchors.

350 PLUGS
- Type: Proprietary types to suit substrate, loads to be supported and conditions expected in use.

370 WOOD SCREWS
- Type:
  - Wood screws (traditional pattern).
    Standard: To BS 1210.
    - Wood screws.
    Pattern: Parallel, fully threaded shank or twin thread types.
- Washers and screw cups: Where required are to be of same material as screw.

380 MISCELLANEOUS SCREWS
- Type: To suit the fixing requirement of the components and substrate.
  - Pattern: Self-tapping, metallic drive screws, or power driven screws.
- Washers and screw cups: Where required to be of same material as screw.

390 ADHESIVES GENERALLY
- Standards:
  - Hot-setting phenolic and aminoplastic: To BS 1203.
  - Thermosetting wood adhesives: To BS EN 12765.
  - Thermoplastic adhesives: To BS EN 204.

EXECUTION

610 FIXING GENERALLY

- Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.
- Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers/ sleeves to avoid bimetallic corrosion.
- Appearance: Fixings to be in straight lines at regular centres.

620 FIXING THROUGH FINISHES

- Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

630 FIXING PACKINGS

- Function: To take up tolerances and prevent distortion of materials and components.
- Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.
- Locations: Not within zones to be filled with sealant.

640 FIXING CRAMPS

- Cramp positions: Maximum 150 mm from each end of frame sections and at 600 mm maximum centres.
- Fasteners: Fix cramps to frames with screws of same material as cramps.
- Fixings in masonry work: Fully bed in mortar.

650 NAILED TIMBER FIXING

- Penetration: Drive fully in without splitting or crushing timber.
- Surfaces visible in completed work: Punch nail heads below wrot surfaces.
- Nailed timber joints: Two nails per joint (minimum), opposed skew driven.

660 SCREW FIXING

- Finished level of countersunk screw heads:
  - Exposed: Flush with timber surface.
  - Concealed (holes filled or stopped): Sink minimum 2 mm below surface.

670 PELLETED COUNTERSUNK SCREW FIXING

- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Pellets: Cut from matching timber, match grain and glue in to full depth of hole.
- Finished level of pellets: Flush with surface.

700 APPLYING ADHESIVES

- Surfaces: Clean. Adjust regularity and texture to suit bonding and gap filling characteristics of adhesive.
- Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
- Finished adhesive joints: Fully bonded. Free of surplus adhesive.

Z21
Mortars

Z21 Mortars

To be read with Preliminaries/ General conditions.

CEMENT GAUGED MORTARS

131 READY-MIXED LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS

- Standard: To BS EN 998-2.
- Lime: Nonhydraulic to BS EN 459-1.
  - Type: CL 90S.
- Pigments for coloured mortars: To BS EN 12878.

160 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1 and CE marked.
  - Types: Portland cement, CEM I.
    Portland limestone cement, CEM II/A-L or CEM II/A-LL.
    Portland slag cement, CEM II/B-S.
    Portland fly ash cement, CEM II/B-V.
  - Strength class: 32.5, 42.5 or 52.5.
- White cement: To BS EN 197-1 and CE marked.
  - Type: Portland cement, CEM I.
  - Strength class: 52.5.
- Sulfate resisting Portland cement:
  - Type: To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
    To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
  - Strength class: 32.5, 42.5 or 52.5.
- Masonry cement: To BS EN 413-1 and CE marked.
  - Class: MC 12.5.

Z22
Sealants

Z22 Sealants

To be read with Preliminaries/General conditions.

PRODUCTS

310A JOINTS EXTERNAL ALUMINIUM WINDOWS - EPDM

- Manufacturer: Adshead Ratcliffe & Co Ltd. Web: www.arbo.co.uk. Tel: + 44 (0)1773 826661.
  Product reference: Arbo EPDM System
  Thickness: 0.75 mm.
  Tensile Strength (Mpa): = 9.
  Elongation: = 400.
  Modulus 300% (Mpa): = 6.
  Hardness (Shore A): 50-70.
  Tear strength (kN/m): = 35.
  Cold folding - 55°C: No cracks.
  Water vapour permeability μ: 50 000.
  Life expectancy: 50 years.
- Arbo Membrane EPDM width: To suit window positions (50 mm increments)
- Adhesive: Arbo SA
  Primer: Arbo 2650 Primer for brick and concrete surfaces
  Technical data:
  Application temperature: 5–40 ºC.
  Service temperature: -40 to +120 ºC.
  Typical Shore A hardness: 30.
  Cure rate at 20 ºC/ 65% RH: 2 mm/ 24 hours. Through cure rate will be retarded where passage of moisture to the centre of a large amount of product occurs.
  Chemical resistance: Resistant to most dilute acids and alkalis. Organic solvents may cause the sealant to swell and lose adhesion.
  UV resistance: Very good.
  Service life: 25 years+.
  Elongation at break: 400%+.
  Bond strength: 31 Mpa.

310B JOINTS EXTERNAL PERIMETER JOINT SEALANT - PPC ALUMINIUM WINDOWS

- Manufacturer: Adshead Ratcliffe & Co Ltd. Web: www.arbo.co.uk. Tel: + 44 (0)1773 826661.
  Product reference: Arbosil 1096 Sealant.
- Colour: Grey
- Accessories:
  Joint backing: Closed cell foam polyethylene rod
  Primer: Arbo Primer 2650 - Required for brickwork and concrete
- Properties
  Not recommended for overpainting or for use with polycarbonate or acrylic sheeting.
  Resistant to most alkalis and dilute acids; organic solvents may cause the sealant to swell and loose adhesion, but do not directly dissolve the material.
  Burns, but will not readily ignite, so does not constitute a fire hazard.
  Should not cause migratory staining on porous surfaces, but dirt and dust washed into or around joints by rainwater may cause pattern staining. The sealant itself may discolour in contact with rubbers, bituminous or pitch-based DPCs, etc. Contact with some metals may also cause discolouration.
  Very good UV resistance.
  Correctly applied, the sealant should not require maintenance, and has an anticipated life in excess of 25 years.
  The product is labelled as harmful. Refer Manufacturers data sheet
  Application temperature: +5°C to +50°C.
  Curing time: 7–14 days depending on joint configuration and atmospheric conditions.
  Joint dimensions:
  - Width: Minimum 6 mm; maximum 25 mm (single application), 60 mm (multiple applications).
  - Depth:
    Porous substrates: Minimum 10 mm; maximum 15 mm.
    Non-porous substrates: Minimum 6 mm; maximum 15 mm.

310C JOINTS EXTERNAL FIRE RESISTANT PERIMETER JOINT SEALANT - PPC STEEL WINDOWS

- Manufacturer: Adshead Ratcliffe & Co Ltd. Web: www.arbo.co.uk. Tel: + 44 (0)1773 826661.
  Product reference: Arbosil 1070 Sealant.
- Colour: Grey
- Accessories: Joint backing: Mineral wool
  Primer: Arbo Primer 2650 - Required for brickwork and concrete
- Properties:
  Fire resistant silicone sealant suitable for perimeter sealing of fire resisting timber, galvanised or polyester powder coated frames, internally or externally.
  In normal service Arbosil 1070 will resist the passage of fire, but will require replacement afterwards.
  Not recommended for overpainting, for use with laminated glass or against natural stone.
  Resistant to most alkalis and dilute acids; organic solvents may cause the sealant to swell and loose adhesion, but do not directly dissolve the material.
  Should not cause migratory staining on porous surfaces, but dirt and dust washed into or around joints by rainwater may cause pattern staining. The sealant itself may discolour in contact with rubbers, bituminous or pitch-based DPCs, etc. Contact with some metals may also cause discolouration.
  Very good UV resistance.
  Correctly applied, the sealant should not require maintenance, and has an anticipated life in excess of 25 years
  Standards and testing:
  BS EN ISO 11600 F/G-25LM.
  Tested to BS 476-20.
  Fire integrity: Refer to technical literature for details of testing and compliance with other standards.
  Single seal: 4 hours integrity; 30 minutes insulation.
  Double seal: 4 hours integrity and insulation.
  The product is labelled as harmful. Refer Manufacturers data sheet
  Application temperature: +5°C to +50°C.
  Curing time: 7–14 days, depending on joint configuration and atmospheric conditions.
  Joint dimensions:
  – Width: Minimum 6 mm; maximum 25 mm single application
  – Depth: Minimum 10 mm; maximum 25 mm.

310D JOINTS INTERNAL PERIMETER JOINT SEALANT - NON FIRE RATED DOORS, WINDWS, TIMBER PRODUCTS GENERALLY
APPLIED PRIOR FINAL DECORATION OF ADJOINING MATERIALS

- Manufacturer: Adshead Ratcliffe & Co Ltd. Web: www.arbo.co.uk. Tel: + 44 (0)1773 826661.
  Product reference: Arbocaulk
- Colour: White
- Accessories:
  Joint backing: Closed cell foam polyethylene rod
- Properties:
  Water-based acrylic sealant suitable for internal low movement joints.
  Not recommended for high movement joints or for external joints.
  Fair resistance to most alkalis and dilute acids; poor resistance to hydrocarbon solvents.
  Will not readily ignite, so does not constitute a fire hazard.
  Can be painted with emulsion and gloss paints when fully cured.
  Correctly applied, the sealant should not require maintenance, and has an anticipated life in excess of 15 years.
  The product is labelled as harmful. Refer Manufacturers data sheet
  Application temperature: +5°C to +50°C.
  Curing time: Allow 3 hours before application of emulsion paint and 12 hours before application of gloss paint.
  Joint dimensions:
  – Width: Minimum 6 mm; maximum 20 mm.
  – Depth:
  Porous substrates: Minimum 10 mm; maximum 10 mm.
  Non-porous substrates: Minimum 6 mm; maximum 10 mm.
  Joint backing: Closed cell foam polyethylene is recommended to pack out deep joints.

310E JOINTS INTERNAL PERIMETER JOINT SEALANT - FIRE RATED DOORS, WINDWS, TIMBER PRODUCTS GENERALLY
APPLIED PRIOR FINAL DECORATION OF ADJOINING MATERIALS

- Manufacturer: Adshead Ratcliffe & Co Ltd. Web: www.arbo.co.uk. Tel: + 44 (0)1773 826661.
  Product reference: Arbo XL 1075.
- Colour: White
- Accessories:
  Joint backing: Mineral Wool
- Properties
  Fire-retardant, water-based acrylic sealant, suitable for perimeter sealing of fire resisting timber, galvanised or polyester powder coated frames.
  Not recommended for external use.
  Fair resistance to most alkalis and dilute acids; poor resistance to hydrocarbon solvents.
  When subjected to flame, the sealant will intumesce (expand and char), thus blocking the passage of smoke.
  Can be painted with emulsion and gloss paints.
  Correctly applied, the sealant should not require maintenance, and has an anticipated life in excess of 20 years.
  The product is labelled as harmful. Refer Manufacturers data sheet
  Standards: BS EN ISO 11600 F-7.5P.
  Tested to BS 476-20.
  Fire integrity: 4 hours.
  Application temperature: +5°C to +50°C.
  Curing time: Allow 3 hours before application of emulsion paint and 12 hours before application of gloss paint.
  Joint dimensions:
  Width: Minimum 6 mm; maximum 20 mm.
  Depth: Minimum 10 mm; maximum 20 mm.

EXECUTION

610 SUITABILITY OF JOINTS

- Presealing checks:
  - Joint dimensions: Within limits specified for the sealant.
  - Substrate quality: Surfaces regular, undamaged and stable.
- Joints not fit to receive sealant: Submit proposals for rectification.

620 PREPARING JOINTS

- Surfaces to which sealant must adhere:
  - Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
  - Clean using materials and methods recommended by sealant manufacturer.
- Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
- Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.
- Protection: Keep joints clean and protect from damage until sealant is applied.

630 APPLYING SEALANTS

- Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
- Environmental conditions: Do not dry or raise temperature of joints by heating.
- Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.
- Sealant profiles:
  - Butt and lap joints: Slightly concave.
  - Fillet joints: Flat or slightly convex.
- Protection: Protect finished joints from contamination or damage until sealant has cured.