



WINDOW Product Specification

The specification for all Dorwin products is based on and relates to, the Trade Standard for PVC-u Windows as issued jointly by the British Plastics Federation and The Glass and Glazing Federation, copies of which can be obtained from:-

The British Plastics Federation
6 Bath Place
Rivington Stret
London EC2A 3JE

Tel: 0207 457 5000

The Glass and Glazing Federation
44-48 Borough High Street
London SE1 1XB

Tel: 0207 403 7177

1. Profiles

Window profiles are supplied by Spectus Systems <http://www.spectusystems.com/>

The profile is constructed from a compound which, has been blended to ensure quality and consistency. The material is white high impact modified window grade PVC-u to BS2782 Part 5 and is colour fast.

The profile is a hollow 3 chamber (across depth) profile with a nominal 3mm wall thickness. The profile is uniform and free from foreign bodies, cracks or marks.

The weight is as stated and approved by the manufacturer and as laid down in the British Plastics Federation and the Glass and Glazing Federation Trade Standards.

The system is tested to BS7412 and BS7413 and is to have the relevant British Board of Agreement assessment. Windows can be manufactured to comply with BS7950.

The profile meets the requirements for class '1' surface spread of flame to BS476 Part 7 Class 1.

Each DORWIN window is permanently marked or labelled in an unobtrusive position, i.e. not visible when the opening light is closed, with the mark of the extruder. The mark must include the date and time when the material was extruded, the machine number that the material was extruded on, the kite mark number and the initials 'SS' which stands for Spectus Systems.

Note: No profile shall contain recycled material.

2 **Construction**

Dorwin holds a BS7412 certificate to verify that manufactured windows meet the BS Kitemark Standard. DORWIN also complies with British Board of Agreement standards for production for the construction industry and operates to BS.EN. ISO9001:2000 standards.

2.1.1 **Assembly**

The window units are designed with all corner joints, transom joints and mullion joints being mitred and fusion welded.

All excess material is to be neatly trimmed and neatly feature grooved to corner, transom and mullion joints.

No polishing flush of any joints are permitted.

There is to be no mechanical jointing of the profile unless the profile section is less than 350mm long.

The window units are designed so that the route of drainage is prevented from passing through the reinforcement chamber.

The finished DORWIN product is free from all sharp edges, burrs and the like that may be hazardous to the user.

The dimensional tolerances on the finished outer frame height and width is + or – 3mm. Frame assembly is such that windows can be installed square within a maximum difference in the diagonals of 4mm.

In all DORWIN window units, adequate drainage is provided to permit the escape of water from platforms or horizontal members beneath each sealed unit.

2.1.2 **Reinforcement**

Reinforcement is made from mild steel of grade ZZ G275N complying with BS2989. All reinforcement is supplied by the systems supplier.

The reinforcement is installed in accordance with the systems supplier's recommended actions.

The reinforcement is secured to the profile so that it does not move or rattle and it maintains the structural integrity of the frame and satisfactory thermal separation. Reinforcement is to be fixed at a maximum of 100mm from the ends and then at a maximum of 400mm centres (300 mm with foiled profiles).

2.1.3 **Glazing**

All DORWIN window units are to be double-glazed with hermetically sealed flat double glazed units to comply with BS5713 (1979).

The glass is of the minimum thickness to meet the wind loading requirements of BS6262 (1982) and glass is in accordance with BS952 Part 1 (1978).

DORWIN windows are such that glazing or re-glazing on site is possible without the need to remove the outer frames from the structure of the building.

Safety glass to be provided where appropriate to comply with the current regulations, particularly those regulations laid out in Document N of the building regulations which is adhered to.

Bathroom, toilet and store windows are usually opaque DORWIN recommend the 'Cotswold' patterned glass though a selection is available.

All door glass is toughened safety glass to BS6206.

All sealed units are guaranteed against breakdown for a minimum of 5 years.

All glazing is to be packed in accordance with BPF/GGF recommendations.

All beads are cut at the correct degree recommended by the manufacturer. All DORWIN windows are internally glazed unless access cannot be gained from the inside.

Any door or side panel with glazing that is 1500mm or less above floor level is glazed with toughened glass in accordance with Document N of the building regulations.

In side panels, or adjoining windows, toughened glass issued where the glass area comes within 300mm of the outer edge of the door and/or is 1500mm or less above the floor level.

For internal and external walls, toughened glass is used for areas of 800mm or less above floor level.

All glazing is in accordance with Document L of the building regulations.

2.1.4 **Marking of Glazing Panels**

All toughened and laminated installed panels are marked as follows:

- (a) An identification name or trademark; or other marks capable of identification through a suitable source.
- (b) The type of material;
- (c) The number of the British Standard;
- (d) The classification relating to impact test behaviour (A B or C);

These marks are permanent and applied before installation in a position to remain visible after installation.

In the case of multiple glazing units, each pane, which complies with the British Standard, is marked accordingly.

The requirements of Document N of the Building Regulations is complied with at all times and any change to those regulations shall take priority over what is written herein.

The requirements of Document L of the Building Regulations is complied with at all times and any change to those regulations shall take priority over what is written herein.

2.1.5 **Fittings**

Hinges and variable geometry stays are of stainless steel or of materials resistant to or protected against atmospheric corrosion.

Friction hinges and variable geometry stays is re-adjustable unless the fittings are designed so as not to need adjustment throughout the life of the windows.

For vertically sliding windows the mechanism or balancing device is accessible for adjustment, repair or replacement after the windows have been installed. The mechanism or balancing device is of material resistant to or protected from atmospheric corrosion.

Hardware, including its fixings, is of materials resistance to or protected against atmospheric corrosion.

Hardware is replaceable without removing the outer frame from the structure. Where hardware is attached directly to the PVC-u profile with screws it is attached with screws that penetrate at least two thickness of the profile and/or penetrate the reinforcement by at least 2mm. Screws are of material compatible with reinforcement and with hardware.

All screws, nuts, bolts and other fastenings are of corrosion resistant material.

Friction stays for casement windows is required to conform to the manufacturers guaranteed load capacity.

2.1.6 **Security and Safety**

Fasteners are designed so that they cannot be released from the outside by the insertion of a thin blade.

No opening light can be opened or removed from the outside, when it is fastened in the closed position, except by breaking part of the window.

Lockable handles are specified to operate from the inside on large opening lights.

Limit catches shall check the opening of all large opening lights, of whatever type, at an aperture of not more than 100mm. To permit the windows to open more widely, the catches is capable of being unfastened only by a deliberate action.

When required, the catches shall re-engage automatically when the windows are closed.

In areas deemed as high security the windows and panels can have the addition of GT Glazing clips and GT Window Stayguard Excluders if required.

3 **QUALITY CONTROL AND TESTING OF MATERIALS**

3.1 **Raw Material**

The material from which the profiles are made shall consist substantially from white polyvinyl chloride. Only those additives and pigments may be used that are needed for the manufacture of the compound and its subsequent conversion into sound, durable extrusions of good surface finish and mechanical strength, as assessed by the requirements of this specification.

The PVC material from which the profiles are made shall conform to the specification given in Table 1 of BS7413.

No profile contains any form of reworked PVCu extrusions.

3.2 **Profile Properties**

(a) **Conditioning of Test Samples**

All samples is stored at 20 + or – 5°C and shall not be tested sooner than 16 hours after production. Test samples is conditioned and tested in accordance with the requirements laid down in the British Standards.

(b) **Appearance and Finish**

The colour of the profile is uniform when viewed by normal or corrected vision at a range of 1 m, in 45° north sky light viewing perpendicular to the surface as described in clause 14 of method A01 of BS 1006 : 1990. The external and internal face surfaces of the profile is free from foreign bodies, cracks or sink marks when similarly viewed.

(c) **Dimensions and Weights**

The profiles is straight such that the longitudinal axis of the profile, as measured on the face surfaces, may deviate from the straight line by no more than 1mm per metre.

The cross section of the profile must conform in shape and dimensions and may deviate by no more than + or – 0.5mm; glazing channels and seal grooves may deviate by not more than + or – 0.3mm. The weight of the profile per metre must not be more than 5% below the nominal value.

(d) **Heat Reversion**

When tested in accordance with BS7413, the mean maximum of profiles is not greater than 2%. There will also not be more than 0.4% variation between individual face sides of the same sample.

Glazing beads are tested in accordance with BS7412 and, for our extrusions the mean maximum reversion does not sample more than a 0.6% variation between individual face sides of the same sample.

(e) **Heat Ageing**

Dorwin windows are tested in accordance with Appendix F of BS7413 the profile shall show no bubbles, cracks or delaminating.

(f) **Resistance to Impact at Low Temperature**

When main frame and casement sash profiles are tested in accordance with Appendix G of BS7413 no sample will exhibit cracking through the entire wall thickness of the profile.

(g) **Colour Fastness**

When tested in accordance with Appendix H of BS7413 the maximum colour change allowed is that rated $\frac{3}{4}$ on the Grey scale specified in BS1006, Part A03C (1978).

(h) **Heat Stability**

When tested in accordance with BS2782 Part 1 Method 130A (1976) the heat stability of the profile material is not less than the manufacturer's declared value and in no case shall the value be less than 85 minutes.

(i) **Weld Factor**

When tested in accordance with the method given in Appendix J of BS7413 the weld factor is not less than 0.7.

3.3 **Mechanical Properties**

The corner weld strength is tested in accordance with Appendix K of BS7413.

The weld joint shall not fracture below a stress level of 20 Mpa.

The break on any face shall not extend entirely along the weld line.

3.4 **Functional Performance**

All classes of window units are tested and meet the following requirements:-

(a) **Air Permeability**

When tested in accordance with BS5368 Part 1 (1985) windows shall meet the performance requirements given in clause 5 of BS6375, Part 1 (1983) for the required test pressure class.

(b) **Water Tightness**

When tested in accordance with BS5368, Part 2 (1980) using spray method No 2 windows shall meet the performance requirement given in Clause 5 of BS6375, Part 1 (1983) for the required test pressure class.

(c) **Wind Loading**

When tested in accordance with BS5368, Part 3 (1985), the maximum test pressures is in accordance with Clause 7 of BS6375 Part 1 (1983) to the specified test pressure of 1200 or other declared value. The windows shall show no permanent deformation or any other damage and there is no failure of the window fastenings. In respect of air permeability and subjected to the re-test requirements of Clause 7.2 of BS6375, Part 1 (1983).

(d) **Ventilation Devices**

When a window contains a permanent ventilation device, this device is blanked off for air permeability and water tightness tests and therefore no assessment are made of its air and water penetration characteristics.

Where a window contains a controlled ventilation device, this device is separately assessed for air and water penetration while in the closed position. The air penetration is expressed in M³/h.

Each ventilator to provide a minimum of 4000mm² of background ventilation controlled by an adjustable deflector, infinitely variable between fully open and fully closed. The deflector is able to be tilted such that the incoming air can be directed by the occupant at will, either up, or down or any proportion in between.

Each louvered canopy is to be secure, provide a minimum of 4000mm² of background ventilation, to be suitably profiled to prevent the entry of rain, and is complimentary to the internal ventilator in both construction and appearance.

Internal and external ventilator components are to have screw covers, to be suitably UV resistant, manufactured from recyclable materials and to be fitted entirely in accordance with the manufacturers instructions.

Ventilator and canopy combinations are to fully meet the requirements of the 1995 Building Regulations (Document F) when used in the quantities shown in the schedule, and are manufactured under BS EN ISO 9001.

DORWIN windows can be fitted with ventilators to give each habitable room a ventilation capacity of 8000mm² where the requirement of Document F of the Building Regulations dictates

All window sections allow for suitable drainage from glazing platform and inner platform.

3.5 **Side Hung Windows**

Furniture and Ironmongery

Hinge: DORWIN offer a number of hinges and associated furniture. Typically DORWIN fit

Securistyle 'Defender Egress' hinge with easiclean facility to meet the emergency egress purposed as stated in the Building Regulations Document B1, Clause 2.11, Section A. The hinge is to be of austenitic steel which give a 500 hour neutral salt spray test to BS7479. Secured using austenitic screws penetrating reinforcement and/or two-wall thicknesses of PVCu.

Securistyle 'Defender' hinge. The hinge is to be of austenitic steel which give a 500 hour neutral salt spray test to BS7479. Secured using austenitic screws penetrating reinforcement and/or two-wall thickness of PVCu.

Securistyle 'Vector Plus' hinge. The hinge is to be of austenitic steel which give a 500 hour neutral salt spray test to BS7479. Secured using austenitic screws penetrating reinforcement and/or two-wall thickness of PVCu.

Securistyle 'Defender Restrictor' hinge. The hinge is to be of austenitic steel which give a 500 hour neutral salt spray test to BS7479. Secured using austenitic screws penetrating reinforcement and/or two-wall thicknesses of PVCu.

Feneseal SX friction stays. Secured using austenitic screws penetrating reinforcement and/or two-wall thickness of PVCu.

Espagnolette:

Roto TSL Locking System

Handle:

Securistyle Virage range

Glazing: The glazing is hermetically sealed flat double glazed units to comply with BS5713 (1979) and be either Ultra T or Pilkington K Glass.

The sealed units is of an overall thickness of 24mm. The glass is of at least the minimum thickness to meet the wind loading requirements of BS6262 (1982) and the glass is in accordance with BS952 Part 1 (1978).

Toughened glass is in accordance with BS6202.

3.6 **Top Hung Windows**

Furniture and Ironmongery

Hinge: DORWIN typically fit Securistyle 'Defender' hinge. Secured using austenitic screws penetrating reinforcement and/or two-wall thicknesses of PVCu.

Securistyle 'Vector Plus' hinge. Secured using austenitic screws penetrating reinforcement and/or two-wall thicknesses of PVCu.

Feneseal SX friction stays. Secured using austenitic screws penetrating reinforcement and/or two-wall thicknesses of PVCu.

Whichever furniture is selected materials for all window hardware, except for window fastenings, shall have at least the equivalent corrosion resistance of BS EN 1670:1998, class 4 when subjected to neutral salt spray test.

Espagnolette:

Roto TSL Locking System

Handle:

DORWIN offer a number of handle choices. The Securistyle Virage range is the usual product fitted.

Glazing: The glazing is hermetically sealed flat double glazed units to complete with BS5713 (1979) and be either Ultra T or Pilkington K Glass

The sealed unit is normally of an overall thickness of 24mm, though we can accommodate 28mm units. The glass is of at least the minimum thickness to meet the wind loading requirements of BS6262 (1982) and the glass is in accordance with BS952 Part (1978).

Toughened glass is in accordance with BS6206.

4 **INSTALLATION**

4.1 **Removal of Existing Windows**

The fitters will check the external and internal structure for existing damage and report any such damage to the occupier before commencing work. Any defects to the existing structure are to be rectified by the occupier before installation can be commenced.

Fitters will use temporary coverage and dust sheets as required to ensure protection to the existing premises during the course of the work.

The occupier will be requested to remove fixtures, furniture, furnishings and fittings as is made necessary by the works and will be responsible for the protection of such items during the progress of the works and for the refixing of all items upon completion.

DORWIN will clean the aperture and remove any mastic from the structure. Protect any existing DPC that is to remain.

DORWIN will remove all debris from site on a daily basis and clean away all debris and glass as work proceeds.

Note: Existing windows shall only be removed when the replacement units are on site and are to be installed during the same working day.

4.2 **Installation of Frame**

Before installation the fitter is to make sure that the opening has been prepared and any repair work has been carried out. Repair or replace any damaged DPC's as necessary. Allow a 5mm gap between the frame and the opening.

The new window is set in the prepared opening. Allow for suitable packing blocks.

The window is fixed into the aperture by drilling and fixing through the outer frame to the existing structure using 'Fischer' fixings, F105 type bolts.

The fixings is no less than 150mm from corners or transoms/mullions and at no more than 600mm centres.

When the frame is securely fixed in position then fit glass and glazing beads. Allow for any necessary glazing blocks and glass lock devices.

Check windows for correct operation before proceeding with making good.

If a sill is to be fixed to the window frame this is fixed with screws inserted from the underside of the sill into the frame. Ends of the sills will be fitted with capping piece.

No fixings are to penetrate the drainage channels.

Where the fitter breaks a sealed unit during the installation then they shall temporarily glaze the opening with a clear or obscure glazing material, whichever is appropriate for that location. This will require appropriate temporary beads, as it will not be permissible to pack out the temporary glazing to suit the double glazing beads. Dorwin may choose to temporarily glaze using boarding or other non-glazing material.

4.3 **Making Good**

The fitter will insert into 5mm gap between frame and structure a flexible foam filler making sure it is far enough in so as not to interfere with the sealant and to be continuous around the frame.

The fitter will make good to the external surface of the window frame with a PVC-u quadrant or cover fillet and finish with a compatible approved low modular silicone sealant to BS5889. All trims and quadrants are to be approved by the occupier prior to fixing.

The occupier will be responsible for making good any disturbed plaster, brickwork and decorations internally and externally including colour wash to brickwork, over 30mm from the aperture.

The fitter clean off excess material and check fittings and gearing.

The fitter will leave the installation clean and in good working order.

5 **GENERAL ITEMS**

4.1 This specification always needs to be read in conjunction with any other relevant documents and drawings.

4.2 It is assumed that DORWIN personnel have visited the site to ascertain the nature of the works and taken all necessary site dimensions, etc.

4.3 Sizes are not to be scaled from any drawings or sketches but should be measured on site prior to manufacture. The design is viewed from the exterior of the property and all prices are to exclude VAT.

4.4 DORWIN reserves the right to charge for all temporary hoardings, warning signs, power, lighting etc and general protection of the works when not in attendance.

4.5 DORWIN reserves the right to charge for all necessary plant, equipment and scaffolding etc as required to safely execute the works in accordance with all

- relevant Codes of Practice. All scaffolding is to conform to the necessary safety requirements.
- 4.6 DORWIN is responsible for obtaining all necessary permits for skips, unloading and storage facilities as required by The Highways Inspector and reserve the right to charge for all necessary fees in connection with same.
 - 4.7 No plant or materials will be stacked or stored on public footpaths. Access on the public footpaths or to the dwelling will be kept clear at all times.
 - 4.8 DORWIN will ensure that all services are protected at all times during the works (eg TV cables, telephone etc) and is responsible for reinstating any services damaged by them during the work.
 - 4.9 DORWIN will ensure that all buildings are kept watertight at all times during the works and whilst not in attendance (e.g. nighttime, weekends etc) and will provide all necessary sheeting and night seals as required.
 - 4.10 DORWIN will provide all necessary protection to the public and is to ensure that the works are secure at the end of each working day and at weekends to prevent unauthorised access.
 - 4.11 The Occupants are responsible for removing furniture, carpets and any other fixtures as necessary to execute the works and to reinstate upon completion.
 - 4.12 DORWIN unless requested to do otherwise will ensure all window units that are removed from the properties and cleared from site at the end of each day and disposed of in line with environmental regulations.
 - 4.13 All works will be carried out in accordance with any Code of Practice or British Standard in force at this time.
 - 4.14 DORWIN will price every item in to specification and commits only to supplying priced items.
 - 4.15 No services are to be drilled through the PVC-u section but are to be ducted around the side frame.
 - 4.16 DORWIN will give a **minimum of 7 days notice** to the occupier prior to commencing work on any dwelling. No work is to commence on any dwelling without the express consent of the occupier.
 - 4.17 DORWIN will ensure that all work above first floor height is carried out using the appropriate access equipment all the relevant safety requirements are to be met in this regard.
 - 4.18 DORWIN will ensure that he has all the necessary materials, fixtures and fittings for the complete property prior to commencement.
 - 4.19 DORWIN will ensure that all works on any individual property is to be completed in one continuous timeline.
 - 4.20 DORWIN will ensure that where a gas appliance is fitted in a room that

The ventilation shall comply with BS5440, Part 2 (1989) and with British Gas Regulations.

- 4.21 Where the ventilation does not comply DORWIN will inform the occupier (or Supervising Officer), in writing, prior to installing a replacement unit in the room.
- 4.22 Any approval for alternative products is in writing from the occupier (or Supervising Officer) or his appointed representative.

6 **Guarantees**

DORWIN guarantee the fabricated unit and installation for a period of ten years from the completion date of any works carried out.

FENSA reserves the right to visit, at any time, to check that the Quality Control methods and building regulations relating to your windows and doors are complied with.

All DORWIN double glazed sealed units are guaranteed, against breakdown, for a minimum of 5 years.

Hardware components will match the manufacturers warranty.

DORWIN will ensure that our surveyor ascertains your requirements regarding windows and doors, e.g. if the occupier requires glass or infill panel to doors; which side the opening door is to be fitted in a patio door unit. Any variance to what has been quoted will be notified to you in writing.

Ventilators