PVC-u WINDOWS Specification

1.1 General Spcification

1.1.1 All products supplied will fully comply with current editions of all relevant British Standards and Codes of Practice, and in particular all profiles are to be manufactured in accordance with BSEN 12608 -2003 Specification for White PVC-u Extruded Hollow Profiles with heat welded corner joints for Plastic Windows: Materials type A (impact modified) and fabricated in accordance with BS 7412 - Specification for Plastic Windows made from extruded hollow profiles.

1.1.2 All window frames will be Kite marked to indicate compliance with these standards.

1.1.3 All hardware should permit the safe cleaning of first floor windows from within the property without putting the occupier in a dangerous position in accordance with BS 8213-1991 (updated 2004) Code of Practice for Safety in Use and During Cleaning of Windows and Doors

1.1.4 All new windows will fully comply with Building Regulations Part L2 Conservation of fuel and power in dwellings 2002 and will meet a requirement of a U Value of a minimum of 1.7 W/m^2K.

1.1.5 For escape windows, where the design of a window means that the minimum escape width would be impeded by the easy clean facility of the window operation, a 90 degree opening shall be designed by means of an easy clean facility that allows the window to slide along the hinge track so that the window can be cleaned safely from the inside in accordance with BS 8213. After cleaning the hinge should allow the window to self relocate and return to its original position and mode of operation simply by closing the opening sash.

1.1.6 These easy clean hinges must be fitted to a casement with a size sufficient to provide a minimum clear opening with a width of 500mm and a height of 850mm at a maximum height of 1,1m from the floor to cill. All to comply with BS5588 Part 1: 1990 section 3.11.5a - Fire precautions in Design and Construction of Buildings - Residential Dwellings. All hinges should be BBA approved.

1.1.7 In addition to the aforementioned British Standards, Codes of Practice the windows shall be in accordance with the following Standards:

- *BS EN 10142:2000 Specification for Hot Dip Galvanized Coating on Iron & Steel*
- *BS EN 12844:1999 Zinc and zinc alloys. Castings Specification.*
- *BS 1006:AO3 Specification Test for Colour Change*

- *BS 1449: Pt 2 Specification for Stainless Steel & Heat Resisting Stainless Plate, Sheet & Strip*
- *BS 4255: Pt1 Specifications for Neoprene (EPDM) Seals Used in Glazing Hermetically Sealed Units*
- *BS 4870 Specification for Approval Testing of Welding Procedures*
- *BSEN 1026 Air Permeability*
- *BSEN 1027 Watertightness*
- *BSEN 12210 Wind Resistance*
- *BS 5440: Pt2 Gas Ventilation Specification.*
- *BS 5713 Specification for Hermetically Sealed Flat Glass Sealed Units*
- *BS 6206 Impact Performance Requirements for Flat Safety Glass for Use in Buildings*
- *BS 6375: Pt1 Performance of Windows Classification for Weather Tightness*
- *BS 6375: Pt2 Specification for Operation and Strength Characteristics*
- *BS 7412 (2002) Manufacture Specification of PVC-u*
- *BS 7413 Profile Specification for PVC-u Profiles or BS EN 12608:2003*

1.2 Profile and Properties

1.2.1 All profiles used shall be of white, Unplasticised Polyvinyl Chloride Extruded Hollow Profiles with heat welded corner joints for plastic windows manufactured from materials Type B as specified in British Standard 7413/ BSEN 12608:2003

1.2.2 The profiles will be of 5 chamber construction with a 3mm minimum wall thickness and be of the Spectus elite 70mm range. The chamber used for reinforcement will allow for drainage/decompression to occur without penetration of the chamber.

1.2.3 The PVC-u material from which the profiles are made shall conform to the specification given in Table 1 of British Standard BSEN 12608:2003. The corner joints to frames and jointing of transoms and mullions to the outer frame and to each other are to be hot plate welded by automatic welding techniques and grooved. All sections shall be jointed perfectly square and flat. Mechanical or solvent jointing will not be permitted.

1.2.4 Permanent marking at 1000mm centres of the profile is required to show Spectus systems name date of manufacture and be employed without the necessity to extract the window.

1.2.5 The PVC-u should be self-extinguishing to prevent enhancement of accidental fires to BS 476 Class 1.

1.3 Weather Performance

1.3.1 Windows shall comply with the following weather performance tests and with BS 6375: Part 1 and with the test methods in BS EN 1026, BS EN 1027 and BS EN 12210.

- Air permeability: A pressure class of 600pa
- Water tightness: A pressure class of 600pa
- Wind Resistance: Double glazing maximum 1/175 deflection

1.3.2 Wind loads to be calculated by the System Fabricator in accordance with site and location for particular scheme in accordance with BS 6399:Part 2.

1.4 Reinforcement

1.4.1 All window frames, transoms, mullions, couplings and opening lights shall be fully reinforced up to 10mm from each corner with appropriate galvanised steel sections in accordance with BS 7412.

1.4.2 Mild steel sections shall be made from sheet hot-dipped zinc coated grade Z2 6275N complying with BS 2989. In all cases reinforcement will not be allowed to come into contact with moisture. All reinforcement shall be fixed with screws at no more than 300mm centres or other approved equal.

1.4.3 The multi-chambered profiles shall be designed so as to completely isolate the reinforcement from the drainage system

1.5 Cills

1.5.1 Where required cills generally shall be overhanging the exterior facade of the building by a minimum 35mm and be of white PVC-u incorporating sealed moulded end caps. Any joints to be hot plate welded with the joint finish being smooth and polished. The entire cill shall be designed to withstand any point loading when positioned against the cills. Cills shall be from the same system supplier as the framing.

1.6 Ironmongery

1.6.1 All screws used to attach ironmongery shall, wherever possible, penetrate the reinforcement. In all instances the appropriate type/size of screw shall be used for fixing. Fixing by rivets or any other means will not be acceptable.

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1.6.3 All handles to side hung casements shall be fitted at 1550mm above finished floor level, always providing that this handle height does not compromise compliance. If compliance is not achievable with a handle height of 1550mm, the contractor shall bring this to the attention of the Contract Administrator, and inform him as to the lowest height whereby the requirements are still achieved.

1.6.4 Each window shall incorporate a "night facility".

1.6.5 Unless specified otherwise, each opening light shall be provided with the following furniture:

- 1 Fab & Fix auto lock cranked positive stop handle
- 1 set Roto TSL Locking Mechanism (twin-cam)
- 1 Avocet standard/easy clean hinge

1.7 Glazing & Gasketry

1.7.1 The design of the glazing system shall be such that removal of the sealed units can only be carried out from the inside. All windows, shall have internally beaded glazing. Provision must be allowed for the satisfactory drainage of moisture to the outside.

1.7.2 All units shall be double glazed and comply fully with BS 5713 and Kite marked either on the glass or printed on the spacer bar. All double glazed units shall have an air gap of 20mm between the panes

1.7.3 Glass shall be specified for type, quality and substance according to BS 952: Part 1, BS EN 572-2, BS EN 579 and with Building Regulation Approved Document N and shall be clear float of British manufacture, free from scratches, bubbles, inclusions, cracks, rippling, dimples and other defects.

1.7.4 Glass shall be at least the minimum thickness to meet wind load and safety requirements and all glazing shall be in accordance with BS 6262. A copy of the Kite mark licence shall be submitted to the Project Manager prior to any glazing being ordered.

1.7.5 The glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.

1.7.6 All glazing shall be fixed centrally in the frame and casements and set on plastic glazing blocks, as per the manufacturer's instructions.

1.7.7 Glass Types and Thickness - Double glazed windows shall be 2 x 4mm clear float glass double glazed units hermetically sealed with a 20mm minimum air-filled space, (subject to size or special requirements).

1.7.8 Obscure glass shall be Obscured (or if specified otherwise, alternative patterns which provide levels of privacy 3, 4 and 5, as defined by Pilkington) The pattern shall be within the glazed unit thus providing smooth finish externally.

1.7.9 All glazing units below 800mm from floor height to cill, or underside of window or within 300mm and below 1500mm from floor level of any doorway and all glazing units to ground floor windows, shall be safety glass Class A to BS 6206. All installed glazing shall be marked in accordance with paragraph 6 of the aforesaid British Standard. The alternative wording in this paragraph will be omitted. Roll pattern to toughened glass shall be horizontal when glazed.