

13.2. PVC U Windows

- 13.2.1. **Frames** - High impact modified white Pvc-u frames. 59 – 70mm multi-chamber outer construction with aluminium or galvanised steel reinforcement to transoms and mullions and galvanised reinforcement to outer frames where appropriate to provide added strength (bay window corners for example to transfer roof load). Outer frame fully welded, transoms and mullions mechanically jointed or welded to provide a strong and durable, watertight construction. Frames manufactured with concealed drainage. Weather seals to openings tested to severe weather rating.
- 13.2.2. Cills are factory fitted and sized to suit set back of frame and sub-cill detail – refer to Construction details and cross-reference with Architects “External features schedule” for each site. The window manufacturer should ensure they have this information to hand together with a copy of the latest site layout plan indicating the handing of plots together with a signed off copy of the pvc-u suppliers “Checklist” of regional requirements.
- 13.2.3. Cill profile acceptors to receive 25mm mdf internal boards.
- 13.2.4. Each and every frame should have the appropriate BS or BBA certification reference clearly visible
- 13.2.5. **Glazing** - Factory glazed 24mm glass units. Obscure glazing to all rooms containing sanitary fittings. Toughened glass to locations required to meet with Building Regulations ADM
- 13.2.6. Houses/Apartments specification: The thermal transmittance value to be not worse than 1.4 w/m²K ‘B’ rated for a typical sized window and a BFRC rating no worse than 0.43. Manufacturer to confirm compliance with the ‘U’ value and rating. All figures to be supplied by the manufacturer (g glass, g window, solar trans etc) for SAP calculation purposes.
- 13.2.7. Rooflights: The thermal transmittance value to be not worse than 1.3 w/m²K for a typical sized window to match the remainder of the dwelling. SAP assessors to adjust the U value, in SAP, in line with the SAP conventions for the slope of the roof.
- 13.2.8. Each and every glazed unit should have the appropriate BS Kitemark (on the glazing bar) permanently marked.
- 13.2.9. **Note:** French Doors to have a minimum of 60% glazing to frame ratio. Glazing at less than 60% will make the room feel darker and will change the calculations in SAP.

13.3. Background Ventilation

- 13.3.1. The amount of background ventilation will be dependent on the ventilation strategy proposed for the particular development which may be dictated by planning/physical constraints.
- 13.3.2. Air Leakage rates, both design and actual, also have an influence on the amount of background ventilation required for any one solution. These must be carefully considered when formulating the ventilation strategy.
- 13.3.3. For our standard range a System 3, decentralised continuous extract solution will be

employed to limit potential design changes that may have to be made dependent on air leakage rates.

- 13.3.4. Background Ventilators, in accordance with the system 3 approach, having a minimum equivalent area of 2500mm² should be fitted in each room, except wet rooms from which air is extracted.
- 13.3.5. It is noted that background ventilation can be omitted for dwellings leakier than 5m³/(h.m²) @ 50Pa. This approach is not recommended due to variation in air leakage test results.
- 13.3.6. Equivalent area performance should comply with BS EN13141-1:2004 (clause4) and be clearly marked on the product.
- 13.3.7. Background ventilators should be located to avoid draughts e.g. typically 1.7m above floor level
- 13.3.8. Purge ventilation should be calculated in accordance with Appendix B of the approved document. Please note the change in requirement depending on the opening ability of the window.
- 13.3.9. Where room requiring purge ventilation is not on an external wall reference should be made to paragraphs 5.14 to 5.16 and Appendix B of Approved Document F which requires hinged or pivot windows that open 30° or more to have an opening part of at least 1/20th of the floor area of the room. For windows that open less than 30° reference should be made to the appendix.
- 13.3.10. In noisy areas, it may be necessary to use either sound attenuating background ventilators or mechanical ventilation solutions depending on the noise level and any planning conditions. Manufacturers are required to provide options to these situations as requested.
- 13.3.11. Automatic opening vents may be required in common areas – see clause 16 for details.
- 13.3.12. Manufacturers are required to produce the appropriate background ventilation table for compliance with the Building Regulations in accordance with the ventilation strategy
- 13.3.13. Details of background ventilation to be added to all working drawings.

13.4. Ironmongery and Security

- 13.4.1. Opening lights to be hung on stainless steel friction hinges concealed in frame rebates giving easy clean facility (min 95mm between frame and casement). They are to have multi-point espagnolette locking head system with mushroom head bolts for high security.
- 13.4.2. Die-cast handles with cylinder locking (except to escape windows) are to be factory fitted as see appendix for options.
- 13.4.3. Windows shall conform to NHBC security requirements and where requested by the regions be produced to the “Enhanced Security” requirements of the British Standard.