



Synseal Extrusions Ltd

Common Road
Huthwaite
Sutton-in-Ashfield
Nottinghamshire NG17 6AD
Tel: 01623 443200 Fax: 01623 550243
website: www.synseal.com

**Agrément
Certificate
No 04/4081**

Designated by Government
to issue
European Technical
Approvals

SYNSEAL CONSERVATORY ROOF SYSTEMS

Système de serre
Gewächshausystem

Product



• THIS CERTIFICATE RELATES TO SYNSEAL CONSERVATORY ROOF SYSTEMS.

• The roof systems are for conservatories used as extensions to new or existing buildings where an external grade door separates conservatory from inner room.

• It is essential that the roofs are installed and used in accordance with the conditions set out in the Design Data and Installation parts of these Front Sheets and accompanying Detail Sheets.

Regulations — Detail Sheet 1

1 The Building Regulations 2000 (as amended) (England and Wales)



The Secretary of State has agreed with the British Board of Agrément that the extension of a building by the addition at ground level of a conservatory, where the floor area does not exceed 30 m², is exempt from the Building Regulations.

2 The Building Standards (Scotland) Regulations 1990 (as amended)



A conservatory forming a single-storey extension to an existing dwelling of purpose sub-group 1B or 1C, where the conservatory does not contain a flue or heat-producing appliance, is not within one metre of a boundary and the floor area does not exceed 8 m², is exempt from these Regulations. For conservatories with floor areas between 8 m² and 30 m² the following is applicable:

Regulation: 22
Standard: J7.1

Conservation of fuel and power
Conservatories

Comment:

Glazing (including frames) for conservatories above 8 m² but under 30 m² may have a U value not more than 3.3 Wm⁻²K⁻¹. See section 5 of Detail Sheet 2 of this Certificate.



A conservatory constructed as an annexe to an existing building and having a floor area not exceeding 30 m² and not less than one metre from any boundary is exempt from these Regulations provided that the conditions described in A5 Exemptions are met.

4 Construction (Design and Management) Regulations 1994 (as amended)

Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See section:

2 *Delivery and site handling* (2.4 and 2.5) of the relevant Detail Sheets.

Design Data

5 Strength and stability

5.1 The design of the Synseal conservatory roof is based on BS 6399-3 : 1988, BS 6399-2 : 1997 and CP 118 : 1969(1973), and on comprehensive calculations prepared by a consulting engineer and verified by the BBA. Information required⁽¹⁾ to carry out a design includes:

- roof type
- site location (to evaluate wind and snow loads)
- glazing material
- span
- roof pitch.

(1) The data is used to establish the glazing bar profiles required and to decide whether tie bars are necessary.

5.2 Structural testing has been used to verify the relevant aspects of the manufacturer's design code.

5.3 The appropriate wind and snow loads should be calculated in accordance with the relevant part of BS 6399. The manufacturer's design covers snow loads of 0.6 kNm⁻² and 0.8 kNm⁻². In all cases, it is assumed that the wind pressure will not exceed these snow loadings. These loads cover the majority of sites in the UK. Where wind loads are outside of this range the advice of the Certificate holder's technical department should be sought.

5.4 The basic acceptance criteria for the design are as follows:

- aluminium sections to CP 118 : 1969(1973)
- deflection limited to span/175 for glazed roofs
- deflection limited to span/125 for polycarbonate roof.

5.5 It is assumed that the supporting structure will have adequate rigidity. This aspect is outside the scope of the Certificate.

5.6 Details of the connections between the roof, the existing structure and the conservatory walls are dependent upon their type and condition. Guidance is available from the Certificate holder or should be entrusted to a suitably qualified person.

6 Ventilation and solar heat gain

6.1 Outward opening casement or tilt and turn lights can be included in the wall frame option to provide natural ventilation. Opening roof vents can be included where required to provide greater levels of rapid ventilation. Additional background ventilation can be provided by the inclusion of trickle ventilators in the head of window and door units.

6.2 Ventilation of a habitable room may occur through an adjoining conservatory where both have ventilation openings with an overall area equal to or greater than that given in the appropriate supporting document to the relevant Building Regulations for the room.

6.3 Solar heat gain through the roof panels and wall frames may provide a useful additional heat input during winter conditions; however, summertime internal temperatures will also be raised. To limit the latter effect, the following design factors should be considered:

- orientation with respect to south
- aspect ratio of the floor plan of the conservatory
- area of opening lights and doors to area of floor expressed as a percentage.

6.4 As an approximate guide, northerly facing conservatories should have opening lights or doors of not less than 1.5% of the floor area, rising to not less than 2.5% with roof blinds for those of a southerly aspect. This should limit the solar gain temperature rise to less than 12°C for most situations in summertime, using only natural ventilation. Where lower temperature rises are desired, consideration can be given to mechanical forced ventilation. More precise methods of design and solar data are given in *CIBSE (Chartered Institution of Building Services Engineers) Guide A* (1999), Section A4 and Appendix 5.A4.

6.5 To reduce the effects of solar heat gain on the internal temperature of the conservatory, blinds or coloured/heat-resistant glazing can be fitted but their performance has not been assessed by the BBA.

7 Security against intrusion

7.1 Glazing sheets are retained by glazing bar top cappings. Removal of glazing bar top cappings is extremely difficult.

7.2 The roof light is fitted with a screw closing mechanism and provides reasonable security against unauthorised entry by the opportunist intruder.

7.3 It is recommended that a conservatory forming an extension to an existing dwelling should retain a lockable exterior type door to the main building.

8 Maintenance

8.1 The conservatory roof can be re-glazed and the gaskets replaced, but these operations should be carried out using the materials supplied by the Certificate holder and approved by the BBA.

8.2 If damage occurs to a roof vent, the furniture and fittings can be readily replaced by releasing the fixing screws and changing the fitting.

8.3 The PVC-U internal and external claddings can be cleaned using water containing household detergent. If dirt is allowed to build up on the members over long periods it may become more difficult to restore the surface appearance. Abrasive cleaners should not be used, particularly on woodgrain finishes as the loss of the acrylic lacquer will have a serious effect on durability.

8.4 Care should be taken when using proprietary materials for cleaning the glazing to ensure that deposits are not allowed to remain on the PVC-U where they may cause discoloration and damage to the surface. In addition, care must be taken to avoid damage to, or discoloration of, the members when stripping paint from adjacent surfaces, for example, by means of a blowlamp, paint stripper or mechanical stripper.

8.5 Paints can adversely affect the impact strength of PVC-U cladding and the application of dark colours to white profiles could lead to a risk of thermal distortion. Therefore, painting of PVC-U is not recommended.

8.6 The roof vent locking mechanisms should be lubricated periodically to minimise wear and ensure smooth operation. The continuous hinge does not require lubrication.

8.7 The roof panels can be replaced, if damaged, by removal of the glazing bar top capping. Cleaning should be carried out using water containing household detergent. To avoid scratching of the surface, only soft cloths should be used when cleaning.

8.8 Low pitch roofs are likely to require more frequent cleaning than those with a higher pitch; a greater pitch aids removal of dirt and debris by rainwater.

9 General

9.1 Design and manufacture of the conservatory roof systems is undertaken by the Certificate holder in accordance with its *Shield and Global Assembly Guide*.

9.2 Cavity trays are required where the conservatory roof abuts the wall of the building for new construction and consideration is given to their inclusion in existing walls in exposed situations.

9.3 When the pitch of the building roof adjacent to the conservatory is steeper than 30° consideration should be given to the inclusion of snow guards. This will prevent the worst effects of snow slides and dropping debris.

10 Preparation

10.1 All supporting side frames incorporating window profile material, ie PVC, timber or aluminium, should be designed in accordance with the relevant British Standards for imposed loadings. The side frames/walls must provide conservatories with overall lateral stability and resistance to axial loading. Advice should be sought from the frame supplier for the specific use of members for the conservatory construction, with due consideration given to the recommended packings between glazing and framework.

10.2 Foundations must meet the requirements of BS 8004 : 1986, *NHBC Standard*, Chapter 4 : 1999 and Zurich Building Guarantees Technical Standards, Section 2, where applicable. Consideration should be taken of local conditions and advice sought from the local authority when necessary. If there are any doubts with regard to the stability of a site, a suitably qualified engineer should be consulted.

Bibliography

BS 6399-2 : 1997 *Loading for buildings — Code of practice for wind loads*

BS 6399-3 : 1988 *Loading for buildings — Code of practice for imposed roof loads*

BS 8004 : 1986 *Code of practice for foundations*

CP 118 : 1969(1973) *The structural use of aluminium*

Conditions of Certification

11 Conditions

11.1 This Certificate:

- (a) relates only to the product that is described, installed, used and maintained as set out in this Certificate;
- (b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- (c) is valid only within the UK;
- (d) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- (e) is copyright of the BBA;
- (f) is subject to English law.

11.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

11.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabrication including all related and relevant processes thereof:

- (a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

(b) continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine; and

(c) are reviewed by the BBA as and when it considers appropriate.

11.4 In granting this Certificate, the BBA is not responsible for:

- (a) the presence or absence of any patent or similar rights subsisting in the product or any other product;
- (b) the right of the Certificate holder to market, supply, install or maintain the product; and
- (c) the nature or standard of individual installations of the product or any maintenance thereto, including methods and workmanship.

11.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.



In the opinion of the British Board of Agrément, Synseal Conservatory Roof Systems are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 04/4081 is accordingly awarded to Synseal Extrusions Ltd.

On behalf of the British Board of Agrément

Date of issue: 30th March 2004

Chief Executive

Associated Detail Sheets

The following Detail Sheets are part of this Certificate:

Detail Sheet	Edition	Date of issue	No of pages	Imprint ref	Title	System status
2	1	30th March 2004	8	01SSC2	The Synseal Shield Conservatory Roof System	Current
3	1	30th March 2004	8	01SSC3	The Synseal Global Conservatory Roof System	Current

British Board of Agrément

P O Box No 195, Bucknalls Lane
Garston, Watford, Herts WD25 9BA

Fax: 01923 665301

©2004

e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk



For technical or additional information, contact the Certificate holder (see front page).
For information about the Agrément Certificate, including validity and scope, tel: Hotline 01923 665400, or check the BBA website.