**NorDan UK Ltd**
3 Almondview Office Park
Livingston
EH54 6SF

Tel: 01506 433173
e-mail: info@nordan.co.uk
website: www.nordan.co.uk

**Agrément Certificate**
**07/4476**
Product Sheet 4

# NORDAN TIMBER DOOR RANGE

# HOMEGUARD ENTRANCE DOORSETS

This Agrément Certificate Product Sheet(1) relates to the Homeguard Entrance Doorsets, single-leaf inward and outward opening doorsets for use as primary access doors in new or existing dwellings, light commercial premises and similar habitable applications.

(1) Hereinafter referred to as 'Certificate'.

**CERTIFICATION INCLUDES:**

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

**KEY FACTORS ASSESSED**

**Thermal properties** — the thermal transmittance value (U value) of a single-leaf timber door from within the range was calculated as 1.1 $W \cdot m^{-2} \cdot K^{-1}$(see section 6).

**Weathertightness** — the doors can be used in the exposure situations described in this Certificate (see section 7).

**Ventilation –** the doors can provide rapid ventilation (see section 8).

**Unauthorised access** — doors from within the range can contribute to preventing unauthorised access to dwellings and similar habitable applications (see section 9).

**Access** — doors fitted with a low threshold that have an appropriate clear opening width will satisfy the requirements of the national Building Regulations (see section 11).

**Durability** — the doorsets will have a service life of at least 25 years subject to the necessary maintenance being performed (see sections 17 and 18).

The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

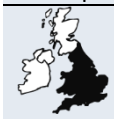
Date of Second issue: 20 January 2021

Hardy Giesler
Chief Executive Officer

Originally certificated on 9 May 2018

## Regulations

In the opinion of the BBA, Homeguard Entrance Doorsets, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



### The Building Regulations 2010 (England and Wales) (as amended)

**Requirement:** **C2(b)** **Resistance to moisture**
Comment: The doors have adequate resistance to the ingress of rain and wind-driven spray and so can contribute to satisfying this Requirement. See section 7.2 of this Certificate.

**Requirement:** **C2(c)** **Resistance to moisture**
Comment: The doors will not constitute a significant condensation risk and so can contribute towards satisfying this Requirement. See section 12.1 of this Certificate.

**Requirement:** **F1** **Means of ventilation**
Comment: The doors can contribute to satisfying this Requirement. See section 8.1 of this Certificate.

**Requirement:** **K4(a)(b)** **Protection against impact with glazing (applicable to England only)**
Comment: Doors fitted with safety glass can satisfy this Requirement. See section 13.1 of this Certificate.

**Requirement:** **L1(a)(i)** **Conservation of fuel and power**
Comment: The doors can contribute to satisfying this Requirement. See section 6.1 of this Certificate.

**Requirement:** **M1** **Access and use of buildings other than dwellings**
Comment: Doors are fitted with accessible (low) thresholds and will contribute to satisfying this Requirement. See section 11.1 of this Certificate.

**Requirement:** **M2** **Access to extensions to buildings other than dwellings**
Comment: Doors are fitted with accessible (low) thresholds and will contribute to satisfying this Requirement. See section 11.1 of this Certificate.

**Requirement:** **M4(1)** **Visitable dwelling – Access and use [applicable to England (dwellings only)]**
Comment: Doors are fitted with accessible (low) thresholds and will contribute to satisfying this Requirement subject to the required clear opening width. See section 11.1 of this Certificate.

**Requirement:** **M4(2)** **Accessible and adaptable dwellings (optional requirement) [applicable to England (dwellings only)]**
Comment: Doors are fitted with accessible (low) thresholds and will contribute to satisfying this Requirement subject to the required clear opening width. See section 11.2 of this Certificate.

**Requirement:** **M4(3)** **Wheelchair user dwellings (optional requirement) [applicable to England (dwellings only)]**
Comment: Doors are fitted with accessible (low) thresholds and will contribute to satisfying this Requirement subject to the required clear opening width. See section 11.2 of this Certificate.

**Requirement:** **Q1** **Unauthorised access**
Comment: The doors, as described in the Enhanced Security Sheet (ES4) for Product Sheet 4, can satisfy this Requirement for new dwellings. See section 9.3 of this Certificate.

| | | |
|---|---|---|
| **Requirement:** | **7(1)** | **Materials and workmanship** |
| Comment: | | The doors are acceptable. See sections 18.1 to 18.4 and the *Installation* part of this Certificate. |
| **Regulation:** | **26** | **$CO_2$ emission rates for new buildings** |
| **Regulation:** | **26A** | **Fabric energy efficiency rates for new dwellings (applicable to England only)** |
| **Regulation:** | **26A** | **Primary energy consumption rates for new buildings (applicable to Wales only)** |
| **Regulation:** | **26B** | **Fabric performance values for new dwellings (applicable to Wales only)** |
| Comment: | | The doors can contribute to satisfying these Regulations. See section 6.1 of this Certificate. |

## The Building (Scotland) Regulations 2004 (as amended)

| | | |
|---|---|---|
| **Regulation:** | **8(1)(2)** | **Durability, workmanship and fitness of materials** |
| Comment: | | The doors satisfy the requirements of this Regulation. See sections 17.1 to 17.7 and 18.1 to 18.5 and the *Installation* part of this Certificate. |
| **Regulation:** | **9** | **Building standards applicable to construction** |
| Standard: | 2.9 | Escape |
| Comment: | | Doors fitted with a thumb-turn lock can satisfy this Standard, with reference to clauses 2.9.0(1) and 2.9.18(2). See section 13.2 of this Certificate. |
| Standard: | 3.10 | Precipitation |
| Comment: | | The doors have adequate resistance to the ingress of rain and wind-driven spray and so can contribute to satisfying this Standard, with reference to clause 3.10.1(1)(2). See section 7.2 of this Certificate. |
| Standard: | 3.14 | Ventilation |
| Comment: | | The doors can contribute to natural ventilation, with reference to clauses 3.14.2(1) and 3.14.3(1) of this Standard. See section 8.1 of this Certificate. |
| Standard: | 3.15 | Condensation |
| Comment: | | The doors will not constitute a significant condensation risk and so can contribute towards satisfying this Standard, with reference to clauses 3.15.1(1), 3.15.4(1) and 3.15.5(1). See section 12.1 of this Certificate. |
| Standard: | 3.16 | Natural lighting |
| Comment: | | The doors can contribute to satisfying this Standard, with reference to clauses 3.16.1(1) and 3.16.3(1). See section 10 of this Certificate. |
| Standard: | 4.1 | Access to buildings |
| Comment: | | Doors are fitted with accessible (low) thresholds and will contribute to satisfying this Standard subject to the required clear opening width, with reference to clauses 4.1.7(1)(2) and 4.1.9(1)(2). See section 11.1 of this Certificate. |
| Standard: | 4.8(a)(b) | Danger from accidents |
| Comment: | | Doors fitted with safety glass can satisfy this Standard, with reference to clause 4.8.2(1). See section 13.1 of this Certificate. |
| Standard: | 4.13 | Security |
| Comment: | | The doors, as described in the Enhanced Security Sheet (ES4) for Product Sheet 4, can satisfy this Standard, with reference to clause 4.13.1(c)(1). See section 9.3 of this Certificate. |
| Standard: | 6.1(b) | Carbon dioxide emissions |
| Standard: | 6.2 | Building insulation envelope |
| Comment: | | The doors can contribute to satisfying these Standards, with reference to clauses 6.1.1(1), 6.1.2(1), 6.1.4(2), 6.1.6(1), 6.1.7(1), 6.2.1(1)(2), 6.2.4(2), 6.2.6(1), 6.2.7(1), 6.2.8(2), 6.2.9(1)(2), 6.2.11(1)(2) and 6.2.13(1)(2). See section 6.1 of this Certificate. |

| | | |
|---|---|---|
| Standard: | 7.1(a)(b) | Statement of sustainability |
| Comment: | | The system can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the system can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4(1)(2) [Aspects 1(1)(2) and 2(1)], 7.1.6(1)(2) [Aspects 1(1)(2) and 2(1)] and 7.1.7(1)(2) [Aspect 1(1)(2)]. See section 6.1 of this Certificate. |
| **Regulation:** | **12** | **Building standards applicable to conversions** |
| Comment: | | All comments given for the system under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1(1) and Schedule 6(1). |

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

## The Building Regulations (Northern Ireland) 2012 (as amended)

| | | |
|---|---|---|
| **Regulation:** | **23** | **Fitness of materials and workmanship** |
| Comment: | | The doors are acceptable. See sections 18.1 to 18.4 and the *Installation* part of this Certificate. |
| **Regulation:** | **28(b)** | **Resistance to moisture and weather** |
| Comment: | | The doors have adequate resistance to the ingress of rain and wind-driven spray and so can contribute to satisfying this Regulation. See section 7.1 of this Certificate. |
| **Regulation:** | **29** | **Resistance to moisture and weather** |
| Comment: | | The doors will not constitute a significant condensation risk and so can contribute to satisfying this Regulation. See section 12.1 of this Certificate. |
| **Regulation:** | **33(c)** | **Means of escape** |
| Comment: | | Doors fitted with a thumb-turn lock can contribute to satisfying this Regulation, with reference to Technical Booklet E, clause 2.87. See section 13.2 of this Certificate. |
| **Regulation:** | **39(a)(i)** | **Conservation measures** |
| **Regulation:** | **40(2)** | **Target carbon dioxide emission rate** |
| Comment: | | The doors can contribute to satisfying these Regulations. See section 6.1 of this Certificate. |
| **Regulation:** | **65(1)** | **Means of ventilation** |
| Comment: | | The doors can contribute to satisfying this Regulation. See section 8.1 of this Certificate. |
| **Regulation:** | **91** | **Access and use** |
| **Regulation:** | **92** | **Access to extensions** |
| Comment: | | Doors are fitted with accessible (low) thresholds and will contribute to satisfying these Regulations subject to the required clear opening width. See section 11 of this Certificate. |
| **Regulation:** | **96** | **Impact with glazing** |
| Comment: | | Doors fitted with safety glass can satisfy this Regulation. See section 13.1 of this Certificate. |

## Construction (Design and Management) Regulations 2015
## Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See sections: 3 *Delivery and site handling* (3.3) and 13 *Safety* (13.3) of this Certificate.

## Additional Information

### NHBC Standards 2021

In the opinion of the BBA, Homeguard Entrance Doorsets, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Part 6.7 *Doors, windows and glazing.*

### CE marking

The Certificate holder has taken the responsibility of CE marking the system in accordance with harmonised European Standard BS EN 14351-1 : 2006.

## Technical Specification

### 1 Description

1.1 The Homeguard Entrance Doorsets (see Figure 1) comprise single-leaf inward and outward opening doorsets and are supplied painted with a polyurethane coating in any standard RAL colour.

1.2 The doorsets are mechanically jointed to the timber frame, and are subject to the size restrictions given in Table 1.

*Table 1 Size restriction of doorsets (with or without glazing)*

| | **Dimension (mm)** | |
|---|---|---|
| | Width | Height |
| Maximum overall size | 1088 | 2388 |

1.3 The doorsets are provided with an aluminium low threshold, to provide access in accordance with the national Building Regulations (see Figure 5 and section 11.1 of this Certificate).

1.4 When glazed, the doorsets are internally glazed with timber glazing beads available in the same range of standard RAL colours.

1.5 The doorsets are available in a range of glazing styles (see Figure 1).

1.6 Framing members comprise profiled, North European Redwood sections formed by cutting the required profiles from engineered timber. The timber is preservative-treated using a vacuum-impregnation technique to BS EN 351-1 : 2007.

1.7 When glazed, doorsets are factory-glazed using sealed double-glazed units(1) (see Figures 2 and 3).

(1) Outside the scope of this Certificate

*Figure 1 Examples of glazing styles*

Alnwick

Balmoral

Buckingham

Trafalgar

Windsor

*Figure 2 Typical vertical section*

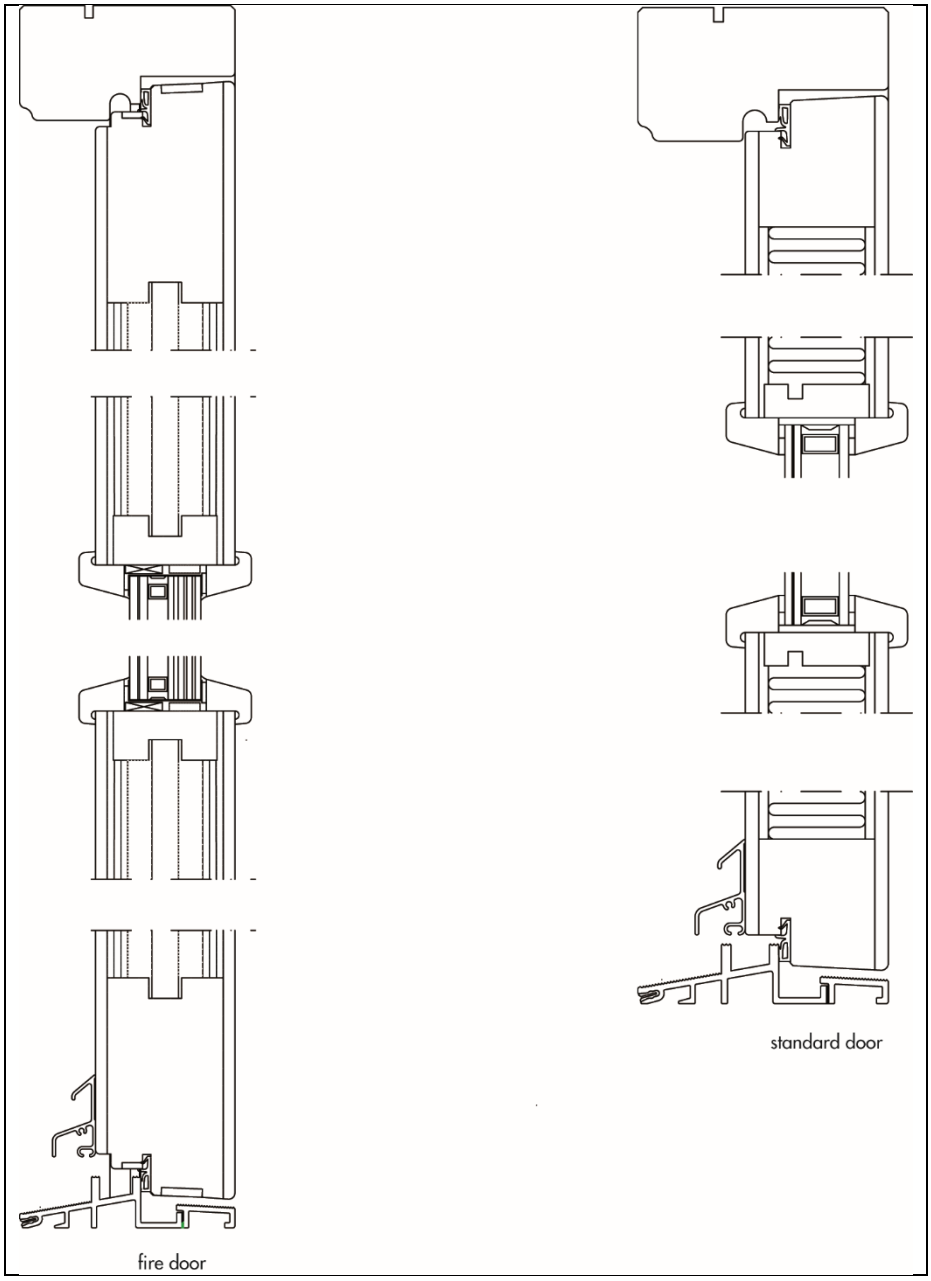
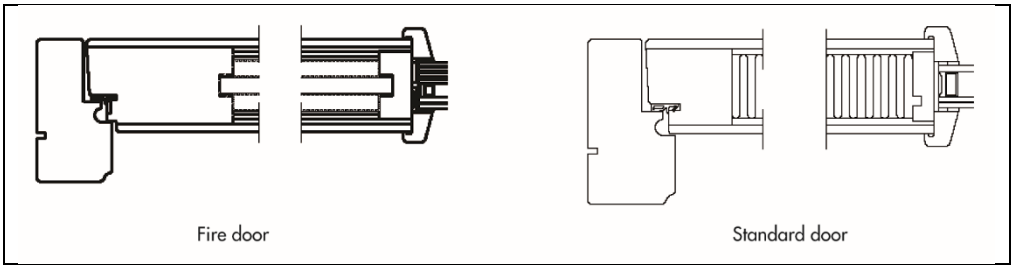



*Figure 3 Typical horizontal section*




**Furniture and fittings**

1.8 All doors covered by this Certificate are hung on three rising butt hinges, each fixed to the frame and door leaf with corrosion-resistant security screws and an Allen bolt.

1.9 Doors are secured by a multi-point lock available as an autolock or manual lock. The autolock features a pressure-sensitive latch that operates hookbolts when the door is closed. The manual lock is operated by a lever-type handle and

features the same hookbolts engaging into striker keeps screwed into the frame. Each lock features a central deadlock operated by a cylinder engaging into a central latch/deadbolt keep screwed to the frame.

1.10 Handles are available with a satin chrome anodised alloy finish and feature a security cowl for the cylinder.

1.11 The doorsets can be supplied with a letterplate; the weathertightness of such doors has been assessed.

**Glazing and panelling**

1.12 Glazed units(1) are sealed into the timber leaf using a polyurethane adhesive sealant and internally beaded using a timber glazing bead secured into place with security screws.

(1) Outside the scope of this Certificate

1.13 The doors are available with a choice of glazing options (see Figure 1), ranging from half-glazed to fully panelled. Where glass is to be used, doors are supplied factory-glazed as standard, using sealed 28 mm double-glazed units in accordance with BS 6262-1 : 2017 or, if required by the national Building Regulations, with toughened or laminated glass in accordance with BS EN 12600 : 2002. Glass is positioned using polyethylene setting blocks and packing pieces.

1.14 Insulated timber panels consist of painted, heavy duty High Density Fibreboard (HDF) as the external face, two sheets of aluminium, an insulation central core consisting of a timber frame with expanded polystyrene (EPS) foam insulation inserted between framing members, and an interior face of heavy-duty HDF or timber-veneered plywood (see Figure 4).

1.15 All glazing is argon-filled, with a warm-edge spacer bar and low emissivity glass.

1.16 The glazing units must satisfy the requirements of BS EN 1279-2 : 2018 and (if relevant) BS EN 1279-3 : 2018.

1.17 NHBC requires(1) that compliance to the Standards referred to in sections 1.13 and 1.16 of this Certificate is confirmed by an appropriate independent technical approvals authority.

(1) *NHBC Standards 2021,* Chapter 6.7.7 *Glazing, Insulating Glass Units.*

*Figure 4 Insulation panel central core*

**Weatherstripping and gaskets**

1.18 Silicone weatherstripping is located in grooves around the periphery of the door leaf and the fixed frame.

1.19 The doors are fitted with silicone gaskets between the frame and the double-glazed unit. The unit is secured by timber glazing beads with an integral EPDM gasket forcing the glass against the internally fitted gasket.

1.20 Timber glazing beads are polyester-powder-coated to match the coloured door leaf. Timber glazing beads are factory-finished-painted in any standard RAL colour.

## 2 Manufacture

2.1 The door outer frame members are profiled from North European Redwood. After all machining has taken place, each wooden component is treated with a vacuum-impregnation preservative to BS EN 351-1 : 2007. Doors are supplied with a polyurethane coating in colours according to standard RAL colour scales.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 All doors are manufactured by NorDan Sp. z o.o, ul. Powodowo 54, 64-200 Wolsztyn, Poland and the management system has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by TUV Rheinland Polska (Certificate 0198 100 15194).

## 3 Delivery and site handling

3.1 The doorsets are delivered to site fully glazed. For transportation they are suitably protected to avoid damage, and packed onto pallets which are bound with plastic binding straps. Care must be taken during all handling processes to avoid the risk of damage. Each door is marked with the customer's reference, production serial number and glass size and make-up for easy identification on site.

3.2 The doorsets should be stored in accordance with the Certificate holder's recommendations.

3.3 The weight of the door frame and of the glazing (which can be obtained from the Certificate holder) and their ease of handling, particularly by one person, must be taken into account when planning site operations.

# Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Homeguard Entrance Doorsets.

## Design Considerations

## 4 Use

Homeguard Entrance Doorsets are satisfactory for use in non-loadbearing applications where doors are installed vertically into the external walls of buildings, as primary access doors, in new or existing dwellings, light commercial premises and similar habitable applications.

## 5 Practicability of installation

The doors are designed to be installed by a competent general builder, or a contractor, experienced with this type of system.

## 6 Thermal properties

6.1 The thermal transmittance value (U value) of a single-leaf Homeguard Entrance door, 1230 mm wide by 2180 mm high, achieved a U value ($U_w$) of 1.1 $W \cdot m^{-2} \cdot K^{-1}$ when calculated in accordance with BS EN ISO 10077-1 : 2017 and BS EN ISO 10077-2 : 2017. The door featured an upper-glazed section consisting of a 26.8 mm double-glazed unit with laminated safety glass as the outer pane, 90% argon-filled cavity, Chromatech Ultra F spacer bar, low emissivity (0.01 emissivity) glass as the inner pane and a lower panelled section consisting of a 40.6 mm expanded polystyrene insulation ($\lambda$ = 0.04 $W \cdot m^{-1} \cdot K^{-1}$), sandwiched between 5.7 mm plywood veneer panels ($\lambda$ = 0.13 $W \cdot m^{-2} \cdot K^{-1}$) incorporating a 0.3 mm aluminium skin.

6.2 The overall thermal insulation of a door will be dependent on the performance of the double-glazed units, when fitted. For units other than those described above, the indicative U values shown in SAP 2012 *The Government's Standard Assessment Procedure for Energy Rating of Dwellings,* Table 6e, can be used. When available, a certified U value by measurement to BS EN ISO 12567-1 : 2010, or by calculation to BS EN ISO 10077-1 : 2017 or BS EN ISO 10077-2 : 2017, should be used in preference.

6.3 Design U values are detailed in the documents supporting the national Building Regulations.

## 7 Weathertightness

7.1 Selected samples of the doors were tested in accordance with BS EN 14351-1 : 2006 (EN 1026 : 2016, EN 1027 : 2016 and EN 12211 : 2016) and are suitable for use as indicated in Table 2 of this Certificate. The classifications are based on the assumption that the outer frame is supported on all four sides in accordance with the Certificate holder's instructions. If classification of a door not covered in Table 2 is required, it should be tested in accordance with BS EN 14351-1 : 2006.

*Table 2 Weathertightness classifications*

| | **Classification according to:** | | | |
|---|---|---|---|---|
| | **Resistance to wind load (BS EN 12210 : 2016)** | **Watertightness (BS EN 12208 : 2000)** | **Air permeability (BS EN 12207 : 2016)** | **Overall UK exposure category (BS 6375-1 : 2015)** |
| Single-leaf doors up to maximum size (with letterplate) | Class CE2400 (2400 Pa) | Class 4A (150 Pa) | Class 4 (600 Pa) | 1200 |
| Single-leaf doors up to maximum size (without letterplate), latched and unlocked | Class CE2400 (2400 Pa) | Class E1200 (1200 Pa) | Class 4 (600 Pa) | 1200 |
| Single-leaf doors up to maximum size (without letterplate), locked | Class CE2400 (2400 Pa) | Class E2400 (2400 Pa) | Class 4 (600 Pa) | 1200 |

7.2 The classifications in Table 2 can be used to determine suitability when selecting exposure categories, in conjunction with Annex A of BS 6375-1 : 2015.

7.3 For unusual building layouts, building shapes or ground topography, the designer will need to give particular consideration to the prevailing exposure conditions.

## 8 Ventilation

8.1 In assessing the contribution of the doors to natural purge ventilation, the area of the opening should be calculated by subtracting 81 mm from the height and 112 mm from the width, and is related to floor area as set out in the documents supporting the national Building Regulations .

8.2 The background ventilation requirements of the various national Building Regulations can be met by the incorporation in the door of a suitably sized trickle ventilator(1).

(1) Outside the scope of this Certificate.

## 9 Unauthorised access

9.1 Doors (fitted with the locking mechanisms and features described in sections 1.9 and 1.10 of this Certificate) when fastened in the locked position cannot be opened by manipulation from the outside (for example, by the insertion of a thin blade) and can contribute to offering security against intrusion.

9.2 Doors provide adequate security against unauthorised entry by the opportunist intruder, when judged against BS 6375-3 : 2009. Where relevant, reference should be made to *NHBC Standards 2021*, Part 6.7 *Doors, windows and glazing*.

9.3 Doors as described in the Enhanced Security Sheet (ES4) for Product Sheet 4 have been tested in accordance with PAS 24 : 2016, Annexes A and B, and can contribute to satisfying the regulatory requirements for unauthorised access to new dwellings in England and Wales and new and existing dwellings in Scotland.

9.4 Attention should be paid to the packing of glazing units adjacent to all locking points. In addition, frame fixings should coincide with the locating points of the locking system, with suitable packing installed between the frame and the fabric of the building.

9.5 The design of the glazing is such that the removal of the glazing from the outside is extremely difficult, as all beads are fitted internally.

## 10 Glass area

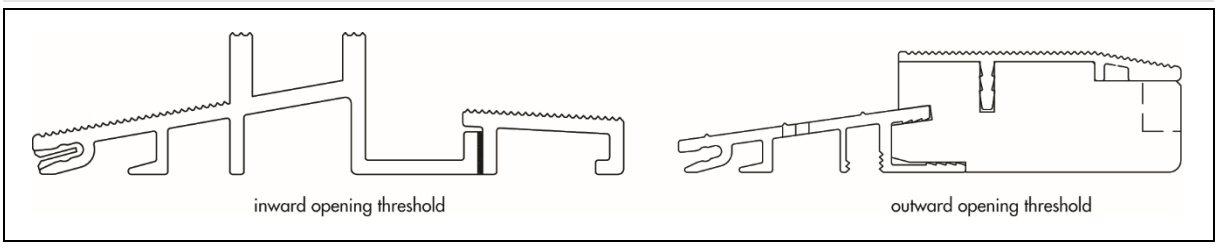
In Scotland, the approximate unobstructed glass area of the doors is determined by deducting from the overall width and height, the appropriate profile dimensions. Typical profile dimensions can be obtained from the Certificate holder. Alternatively, the glazed area of the door can be measured.

## 11 Access

11.1 Doors are fitted with an aluminium low threshold designed to meet the requirements of the documents supporting the national Building Regulations when suitably installed (see Figure 5).

11.2 When an external residential door has the minimum required clear opening width according to the documents supporting the national Building Regulations, it will provide access for all persons, including those who require wheelchair access.

*Figure 5 Typical aluminium low-threshold section*




## 12 Condensation risk

12.1 In normal domestic or similar applications, timber doors will not constitute a significant condensation risk when correctly installed.

12.2 Guidance on some satisfactory design details is given in *Limiting thermal bridging and air leakage : Robust construction details for dwellings and similar buildings* TSO 2002 and the *Accredited Construction Details*. Further information is contained in BRE Report BR 262 : 2002.

## 13 Safety

13.1 Glazed doors, where required, are fitted with safety glass complying with BS EN 12600 : 2002 and therefore meet the safety recommendations given in BS 6262-4 : 2018(1).

(1) Dealing with the safety of people upon impact with glazing.

13.2 When the doors are fitted in an escape route, they should be fitted only with a lock or fastening which is readily operated, without a key, from the side approached by people making an escape. Homeguard Entrance Doorsets are fitted with a key/thumb-turn cylinder which allow this escape.

13.3 When selecting means of access during the period of installation (for example, the use of scaffolding), the safety of the operatives, occupants and passers-by should be considered.

## 14 Resistance to impact

14.1 The doorsets will be unaffected by the soft or hard body impacts likely to be encountered in dwellings or similar applications.

14.2 Slamming of the door leaf, such as could occur in high winds, will not cause damage to the door leaf or frame.

## 15 Performance in relation to fire

The fire resistance of a Homeguard Entrance door up to maximum size according to BS EN 1634-1 : 2014 is defined in Table 3. Details of doors tested can be found in Test reports LBO-939/17E and LBO-940/17E, copies of which can be obtained from the Certificate holder.

*Table 3 Fire resistance classification according to BS EN 1634-1 : 2014*

| Door type | Classification |
|---|---|
| Inward opening Homeguard Entrance door (glazed), with letterplate | Class $EI_1$ 30 |
| Inward opening Homeguard Entrance door (unglazed), with spy-hole | Class $EI_1$ 45 |

## 16 Ease of operation

The doors can be operated without difficulty when correctly installed.

## 17 Maintenance

17.1 The doors can be re-glazed and the gaskets and weatherstripping replaced. Should damage occur to the glazing unit, the damaged unit should be removed by cutting through the polyurethane adhesive sealant with a sharp knife. This process should only be carried out by specialist operatives using the materials recommended by the Certificate holder and approved by the BBA. Details of replacement units are available from the Certificate holder.

17.2 If the gasket is damaged on a glazing bead (for example, during re-glazing), the gasket may be replaced. Replacements are available from the Certificate holder. This operation should be carried out by specialist operatives using the materials recommended by the Certificate holder and approved by the BBA.

17.3 If damage occurs, the furniture and fittings can be replaced by releasing the fixing screws and changing the fitting.

17.4 The handle, hinges and locking system should be cleaned and lubricated periodically in accordance with the Certificate holder's instructions to minimise wear and to ensure smooth operation. More frequent lubrication may be required depending on the environmental conditions.

17.5 The seal to the building structure will need to be replaced within the life of the door.

17.6 The coatings can be cleaned using a soft sponge and soapy water. Solvent-based, corrosive or abrasive cleaners must not be used. If dirt is allowed to build up on the coating over long periods, it may become more difficult to restore the surface appearance.

17.7 Care should be taken when using proprietary materials for cleaning the glass, to ensure that deposits are not allowed to remain on the coated surfaces 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 timber (for example, by means of a blowlamp or paint stripper).

17.8 If damage occurs to the paint, repairs should be carried out as described in the Certificate holder's instructions using paints(1) as recommended by the Certificate holder.

(1) Outside the scope of this Certificate.

## 18 Durability

18.1 The doors will have a service life of at least 25 years, subject to the necessary maintenance being carried out as described in section 17 of this Certificate. This may be extended to up to 60 years for the coloured coating system, provided that it is regularly overcoated in accordance with section 18.3 of this Certificate.

18.2 The timber frame members are preservative treated with an effective fungicide to BS EN 351-1 : 2007.

18.3 The coloured coating system used on the wooden surfaces has good chemical resistance and colour stability and will retain its appearance for at least 10 years without decoration. The coating adheres well to the substrate and will retain its integrity for a similar period. However, the coating may need to be repainted within this period using paints(1) as recommended by the Certificate holder.

(1) Outside the scope of this Certificate

18.4 Fittings, including the hinges, locking mechanism and operating handles, as described in this Certificate, will have a durability of 25 years, except where doorsets are to be installed in areas subject to particularly aggressive conditions. These conditions can prevail in coastal locations or near sources of industrial pollutants and replacement of fittings may be necessary within the life of the doorset.

18.5 The gaskets, weatherstripping and fittings may need to be replaced within the life of the door.

18.6 Any slight colour change or surface dulling of the coating which might occur will be uniform over the visible surfaces of the doors.

## 19 Reuse and recyclability

The timber frame members, timber leaf panel and aluminium threshold and drip-trim can be recycled.

# Installation

## 20 General

20.1 The Homeguard Entrance Doorsets must be fixed into the opening, in accordance with the Certificate holder's installation instructions and BS 8213-4 : 2016.

20.2 Openings in new walls should be formed using a suitable template, making allowances for fitting tolerances. As details may vary depending on the type of construction employed, tolerances should be discussed with the Certificate holder prior to establishing the manufacturing dimensions for the door. The door should not be built-in at the construction stage.

20.3 In common with other types of doors fitted to prepared openings, the system must be correctly positioned in relation to vertical damp-proof courses to prevent water penetration to the internal reveal.

20.4 The provision of a cavity closer and/or cavity barrier around the door opening, prior to the installation, may be required. Details of such products covered by an Agrément Certificate can be found on the BBA website.

## 21 Procedure

21.1 After checking the dimensions of the doorset, the door leaf is lifted off its hinges and the frame positioned into the opening using rot-proof dense wedges, ensuring the frame is level and plumb without twist.

21.2 The door leaf is re-fitted and a suitable weight applied to seat the hinges, removing any slack and thus reducing future fatigue. The gap on the lockable side is checked to ensure it is a little less than that on the hinged side.

21.3 The installation is completed by spraying all surfaces with water and applying a low-expansion polyurethane foam in the gap between the wall and door frame whilst ensuring that the door frame is braced to resist over expansion of the foam. This is followed by the application of a silicone or similar durable sealant to the door/wall junction as required.

# Technical Investigations

## 22 Tests

22.1 Tests were carried out to determine:

- operating forces
- air permeability
- watertightness
- wind resistance
- resistance to vertical loads
- resistance to static torsion
- resistance to soft and heavy body impact
- resistance to hard body impact
- resistance to repeated opening and closing
- thermal cycling
- basic security
- effectiveness of wood preservation
- enhanced security.

22.2 Additional test work was carried out on the door hardware to determine:

- resistance to salt-spray corrosion
- cross-cut adhesion
- appearance after UV-ageing.

22.3 Tests to determine the durability of the coating were carried out including:

- cross-cut adhesion
- colour stability after UV ageing
- water absorption.

## 23 Investigations

23.1 An assessment was made of tests carried out on doors, generally in accordance with BS EN 14351-1 : 2006.

23.2 The thermal transmittance value of a single-leaf Homeguard Entrance Doorset was calculated in accordance with BS EN ISO 10077-2 : 2017.

23.3 An assessment was made of the fire resistance of Homeguard Entrance Doorset, generally in accordance with BS EN 1634-1 : 2014.

23.4 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

## Bibliography


BRE Report 262 : 2002 *Thermal insulation: avoiding risks*

BS 6262-1 : 2017 *Glazing for buildings — General methodology for the selection of glazing*
BS 6262-4 : 2018 *Glazing for buildings — Code of practice for safety related to human impact*

BS 6375-1 : 2015 + A1 : 2016 *Performance of windows and doors — Classification for weathertightness and guidance on selection and specification*
BS 6375-3 : 2009 +A1 : 2013 *Performance of windows and doors — Classification for additional performance characteristics and guidance on selection and specification*

BS 8213-4 : 2016 *Windows and doors — Code of practice for the survey and installation of windows and external doorsets*

BS EN 351-1 : 2007 *Durability of wood and wood-based products — Preservative-treated solid wood — Classification of preservative penetration and retention*

BS EN 1279-2 : 2018 *Glass in building — Insulating glass units — Long term test method and requirements for moisture penetration*
BS EN 1279-3 : 2018 *Glass in building — Insulating glass units — Long term test method and requirements for gas leakage rate and for gas concentration tolerances*

BS EN 1634-1 : 2014 + A1 : 2018 – *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware — Fire resistance test for door and shutter assemblies and openable windows*

BS EN 12207 : 2016 *Windows and doors — Air permeability — Classification*

BS EN 12208 : 2000 *Windows and doors — Watertightness — Classification*

BS EN 12210 : 2016 *Windows and doors — Resistance to wind load — Classification*

BS EN 12600 : 2002 *Glass in building — Pendulum test — Impact test method and classification for flat glass*

BS EN 14351-1 : 2006 + A2 : 2016 *Windows and doors — Product standard, performance characteristics — Windows and external pedestrian doorsets*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

BS EN ISO 10077-1 : 2017 *Thermal performance of windows, doors and shutters — Calculation of thermal transmittance — General*
BS EN ISO 10077-2 : 2017 *Thermal performance of windows, doors and shutters — Calculation of thermal transmittance — Numerical method for frames*

BS EN ISO 12567-1 : 2010 *Thermal performance of windows and doors — Determination of thermal transmittance by the hot-box method — Complete windows and doors*

EN 1026 : 2016 *Windows and doors — Air permeability — Test method*

EN 1027 : 2016 *Windows and doors — Watertightness — Test method*

EN 12211 : 2016 *Windows and doors — Resistance to wind load — Test method*

PAS 24 : 2016 *Enhanced security performance requirements for doorsets and windows in the UK — Doorsets and windows intended to offer a level of security suitable for dwellings and other buildings exposed to comparable risk*

## 24 Conditions

24.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

24.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

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

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

24.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

24.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

24.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.

**British Board of Agrément**
Bucknalls Lane
Watford
Herts WD25 9BA

tel: 01923 665300
clientservices@bbacerts.co.uk
**www.bbacerts.co.uk**