

Blankfort™ 30

Fire Resistance Test Data

Blankfort™ 30 has been tested at Chiltern International Fire Limited to BS 476: Part 22: 1987 in a wide variety of sizes and configurations as follows:

ULSASD: unlatched single acting single door **DADD + O/P:** double acting double door + overpanel **LSASD:** Latched single acting door
ULSASDD: unlatched single acting double door **DASD:** double acting single door ***TT:** Test Terminated

| Test No. | Configuration | Leaf Size (mm) | Performance (Mins) |
|------------|---------------|---------------------------|---------------------|
| RF95059 | ULSASD | 2700 x 915 | 45 |
| | ULSASD | 2134 x 915 | 40 |
| RF95111 | ULSASD | 2700 x 915 | 54 |
| RF95106 | DADD+O/P | 2403 x 840 +400 O/P | 38 |
| RF96015 | ULSADD+O/P | 2193 x 806 +394 O/P | 31 (glass) 43 (TT)* |
| RF98018 | ULSASD | 2600 x 860 (3 no. leaves) | 41, 49, 41 |
| RF00004 | ULSASD | 2600 x 840 | 46 |
| RF00035 | ULSASD | 2134 x 915 | 34 |
| | ULSASD | 2440 x 1220 | 41 |
| RF01114 | ULSASD | 2134 x 915 | 38 |
| BTC 10939F | ULSASD | 2700 x 915 | 33,56 |
| RF06157 | ULSASD | 2135 x 915 | 32,34 |

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Permitted Leaf Sizes and Configurations

Assessment FEA/F98073 Revision C combines all the above evidence and based on the levels of over-performance achieved in fire testing, permits the following leaf sizes and configurations to be used in FD30/FD30s applications:

ULSASD: unlatched single acting single door **DADD + O/P:** double acting double door + overpanel **LSASD:** Latched single acting door
ULSASDD: unlatched single acting double door **DASD:** double acting single door **TT:** Test Terminated

| Configuration | Frame | Max. Leaf sizes (mm) |
|--------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LSASD | S/wood 70 x 32 | From 2134 x 1001 - To 2327 x 915 |
| DASD & ULSASD | Ditto | From 2134 x 976 - To 2277 x 915 <i>Intumescent for above: 15mm x 4mm to jambs and head, centrally fitted</i> |
| LSASD | H/wood 70 x 32 | From 2440 x 1471 - To 2937 x 1220 |
| DASD & ULSASD | Ditto | From 2440 x 1444 - To 2887 x 1220 <i>Intumescent for above: To head, one 20mm x 4mm, centrally fitted. To jambs, one 15mm x 4mm, centrally fitted. For leaves over 1000mm wide, one 20mm x 4mm</i> |
| LSASD | H/wood 70 x 32 | From 2700 x 1169 - To 3425 x 915 |
| DASD & ULSASD | Ditto | From 2700 x 1144 - To 3375 x 915 <i>Intumescent for above: To head, one 20mm x 4mm, centrally fitted. For leaves over 3100mm increase to 35mm x 4mm. To jambs, one 15mm x 4mm centrally. For leaves over 1000mm wide, one 20mm x 4mm</i> |
| LSASD | H/wood 70 x 32 | From 2700 x 1153 - To 3380 x 915 |
| DASD & ULSASD | Ditto | From 2700 x 1128 - To 3330 x 915 <i>Intumescent for above: To head, one 20mm x 4mm. To jambs, one 30mm x 2mm concealed in rear face of the door edge lippings</i> |
| LSASD + O/P | H/wood, S/wood or MDF 70 x 32 | From 2403 x 1074 - To 2965 x 840 |
| DASD, ULSASD + O/P | Ditto | From 2400 x 1049 - To 2915 x 840 Overpanels of up to 2000mm high are permitted in addition to the leaf sizes shown. <i>Intumescent for above: To frame head, one 15mm x 4mm centrally. To jambs: one 15mm x 4mm. To bottom edge of overpanel: Square edges: one 25mm x 4mm centrally. For leaves over 2700mm high, increase to 35mm x 4mm. Rebated edges: one 15mm x 4mm centrally fitted in rebate of overpanel and door leaf</i> |
| LSADD | H/wood, or MDF 70 x 32 | From 2403 x 1024 - To 2865 x 840 |
| DADD & ULSADD | Ditto | From 2403 x 999 - To 2815 x 840 <i>Intumescent for above: To frame head, one 25mm x 4mm centrally, for leaves over 2700mm, increase to 35mm x 4mm. To jambs: one 15mm x 4mm centrally. To square meeting edges: one 15mm x 4mm centrally fitted in one edge only. To rebated meeting edges: one 15mm x 4mm centrally fitted in bottom of each rebate</i> |
| LSADD + O/P | H/wood, S/wood or MDF | From 2403 x 974 - To 2765 x 840 |
| DADD, ULSADD + O/P | Ditto | From 2403 x 949 - To 2715 x 840 Overpanels of up to 1500mm high are permitted in addition to the leaf sizes shown. <i>Intumescent for above: To frame head, one 15mm x 4mm centrally. To jambs: one 15mm x 4mm. To square meeting edges: one 15mm x 4mm centrally fitted in one edge only. To rebated meeting edges: one 15mm x 4mm centrally fitted in bottom of each rebate. To square bottom edge of overpanel: one 25mm x 4mm, for leaves over 2700 high increase to 35mm x 4mm. To rebated bottom edges of overpanel: one 15mm x 4mm centrally fitted in bottom of each rebate</i> |

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Sizes

Blankfort™ 30 is available in the following standard sizes:

- 840mm x 2060mm x 45mm
- 915mm x 2750mm x 45mm
- 915mm x 2135mm x 45mm
- 1220mm x 2440mm x 45mm
- 915mm x 2440mm x 45mm
- 915mm x 3050mm x 45mm

Other sizes and thicknesses are available to special order

Weight

Blankfort™ 30 with chipboard faces – 24.10 kgm²

Blankfort™ 30 with MDF faces – 25.00 kgm²

Blankfort™ 30 with plywood faces – 24.60 kgm²

Door Frames

Frames should be 640 Kg/m³ density or greater hardwood, softwood to class J30 as specified in BS: EN 942: 1996 and a density of 500 Kg/m³ density or greater, or MDF with a minimum density of 720 Kg/m³ for a minimum 70mm x 32mm section (with 12mm planted or integral stop in single acting mode).

Intumescent

The following materials are approved for use with **Blankfort™ 30** in all configurations and sizes is:

- Palusol 100P if exposed and 100EC if concealed
- Therm-A-Seal may be used in single leaf applications in leaf sizes from 3050mm x 915mm to 2440mm x 1220mm and in double leaf applications for leaf sizes up to 2440mm x 915mm
- Lock forends and keeps over 150mm long should be protected with 1mm Interdens intumescent gaskets
- Leaves up to 2300mm do **not** require intumescent protection to hinges

Ancillaries

A variety of additional components are also permitted to be used with **Blankfort™ 30** doors:

- Door selectors
- Letter plate systems when tested to BS 476: Part 22: 1987 in timber based doorsets
- Face-fixed panic ironmongery
- Brass and steel door viewers no more than 25mm in diameter

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Glazing

Up to 1.90 m² of glazing is approved in **Blankfort™ 30** for multiple paned models. No glazing is permitted within 100mm of door edge and a minimum of 80mm must be left between apertures

The following glazing systems are approved:

- Sealmaster – Fireglaze 30
- Intumescent Seals – Therm-A-Glaze 30
- Lorient Polyproducts - System 36 channel
- Lorient Polyproducts – Flexible figure 1
- Mann McGowan - Pyroglaze 30
- Reddiplex Group – R8193 channel

Approved glasses are as follows:

- 6 & 7 Pyroshield
- 7.5 Pyrodur Plus
- 10 Pyrodur
- 15 Pyrostop
- 7 Pyroguard
- 7 Pyrobelite
- 12 Pyrobel

Alternative glasses are acceptable providing they have demonstrated adequate performance in timber doorsets of comparable construction.

Aperture shape is unrestricted.

Any single pane or Pattern 10 configuration is limited to a maximum area of 1.07m².

Acoustic Performance

When tested to BS EN ISO 140-3: 1995, **Blankfort™ 30** doorsets fitted with simple perimeter seals and concealed drop threshold seals, and in fully operational mode achieved:

- Weighted SRI Rw: 34dB in single doors
- Weighted SRI Rw: 33dB in double doors (square edges)

Mechanical Performance

Blankfort™ 30 Particleboard and MDF-faced doorblanks in single-acting single door, single-acting double door and double-acting single door configurations have been mechanically tested at the laboratories of Chiltern Dynamics to DD171, EN947, EN 948, EN949, EN950, EN1191, and PAS 23 clause 6.3

All configurations achieved **Severe Duty** gradings to BS EN 1192 and DD171

Chiltern Dynamics assessment report Chilt/P06121 applies

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Further Production

Blankfort™ 30 can be cut and machined with standard woodworking tools.

Blankfort™ 30 can be cut in length or width without invalidating fire test evidence. Simply ensure that when using doorblanks of 2440mm and longer, the top rail is retained.

Hardwood lippings with minimum density of 580 Kg/m³ are required on vertical edges only unless a flush overpanel is used. Double-acting doorsets will require the bottom edge of the overpanel top to be lipped. Single-acting doorsets with rebated head junctions will require both top of door and bottom of overpanel to be lipped.

Lippings should be applied with urea formaldehyde, Cascamite, PU, PF or PVA adhesives. In areas of high humidity, lippings should be applied to all edges.

Minimum lipping dimensions are: square edges: 8mm–18mm thick, rounded edges: 12mm–18mm with maximum of 4mm profiling, rebated edges: 20mm–30mm with 12mm deep rebate

Wood veneers and plastic laminates up to 2mm thick can be applied to surfaces of **Blankfort™ 30** with PVA, UF or PF adhesives used in accordance with manufacturers recommendations and as appropriate for the materials involved.

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Ironmongery

Standard ironmongery components used in fire, acoustic and mechanical testing included the following:

- 100 x 35 Steel butt hinges
- Royde & Tucker H105 lift off hinges
- 100 x 43 Yale stainless ball bearing hinges
- Dorma TS73V face-fixed overhead closers
- Dorma BTS75 floor spring assemblies
- Tubular and standard 63mm mortise latches with aluminium lever handles
- RP8 and IS8010si threshold seals
- When using hinges with doors over 2300mm high, 4 hinges must be fitted

As a general guide, latches/locks of the following specification are acceptable:

- **Maximum forend and strike plate dimensions: 200mm high x 32mm wide x 6mm thick**
- **Maximum body dimensions: 25mm thick x 100mm wide x 150mm high**
- **Materials: No combustible materials and all parts essential to the locking/latching action must be steel or brass**

Concealed cableways for electro-magnetic closing/latching mechanisms are permitted in one of the following ways:

- A 10mm diameter hole centrally drilled in the core extending across the width of the leaf.
- A central 10mm x 10mm groove rebated into the edges of the core, with the base of the groove lined with 10mm x 2mm Interdens intumescent gasket. The groove must then be capped by a hardwood lipping glued in place.
- Steel flush bolts may be fitted to the top and bottom meeting edges up to 200mm x 20mm deep x 34mm wide and the top bolt must be bedded on 1mm Interdens or 2mm Therm-A-Flex intumescent gaskets.
- The Dorma ITS 96 concealed overhead closer is also approved when using the supplied intumescent protection pack.
- Face-fixed ironmongery (kick and push plates and pull handles not exceeding 30% of the leaf area) may be fitted and may be recessed up to 2mm deep. Bolt-through handles may be fitted providing the hole is lined with Interdens intumescent gaskets.
- Air transfer grilles which have been successfully tested in timber-based doors may be installed and should not exceed 0.20 m² with no linear dimension exceeding 600mm. The area of the grilles must be deducted from the area of any glazing that may be required.

Smoke Control

When a smoke control function is required, the doorset must be fitted with a smoke seal that has been tested in accordance with BS 476: Part 31: Section 31.1 and demonstrated to maintain a leakage rate below 3m³/m/h when tested at 25 Pa.

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Options available

- Special sizes and thicknesses
- FSC and UFF components
- Urea-formaldehyde free
- Pre-lipped Blank
- Pre-veneered blank
- Cut-to-size blank

Storage

Blankfort™ 30 should be stored flat on at least three equally spaced bearers and in a dry and controlled environment similar to that intended for further production or use.

Installation

Guidance for fixing doorsets and providing adequate fire resistant sealing to the structural openings is documented in BS8214: 1990 "Code of practice for fire door assemblies with non-metallic leaves".

Frame jambs must be fixed to an adequate supporting construction using steel fixings at 500mm maximum centres. The fixings must be of the type suitable for the supporting construction and must penetrate to a depth of at least 50mm. Whilst it is not essential to fix the frame head, packers must be inserted.

As a general guide, gaps should not exceed 4mm.

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