
CERTIFICATE OF APPROVAL

No. ME0175

This is to certify that the referenced products of

SUNDART PRODUCTS LIMITED

2nd Floor, Abbott Building, Road Town, Tortola, British Virgin Islands
Tel: int +852 2413 2133 Fax: +852 2413 2166

have been assessed against the requirements of the *warringtonfire – mideast certification scheme* and are approved for use within the scope of the test and/or assessment report(s) referenced.

Sundart Products Limited FD60 Lamcor Door Assemblies

60 Minutes Integrity Performance In Accordance With BS 476: Part 22: 1987

Assessment Report Reference	Valid Until
WFRC No. C82428 Plus all associated supplements	1 st May 2012
CERTIFIRE Certificate CF No. 409	30 th October 2010

Doorset configuration	Maximum Height (mm)	Maximum Width (mm)	Area (m ²)
Single-Acting, Single-Leaf, (Latched)	2514 (at 1163 wide)	1210 (at 2413 high)	2.92
Single-Acting, Single-Leaf, (Unlatched)	2500 (at 1095 wide)	1210 (at 2257 high)	2.71
Double-Acting, Single-Leaf,	2757 (at 1345 wide)	1345 (at 2757 high)	3.71
Single-Acting, Double-Leaf	2200 (at 912 wide)	960 (at 2094 high)	2.00
Double-Acting, Double-Leaf	2200 (at 912 wide)	960 (at 2094 high)	2.00

⁽¹⁾ Under no circumstances must either the maximum height, maximum width or maximum area be exceeded without separate approval.

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Door Specification	
Door frame – Hardwood*	Minimum density 600kg/m ³ , minimum section size 95mm by 32mm plus stop of minimum size 12mm by 25 mm (minimum density 350kg/m ³ . * hardwood except ash or iroko.
Mild/stainless steel clad hardwood*	Minimum density 500kg/m ³ , minimum section size 140mm by 40mm plus stop of minimum size 15mm by 78 mm (minimum density 400kg/m ³ . * hardwood except ash or iroko. Cladding of maximum 1mm thick Mild / stainless steel (interrupted at intumescent seal position), adhered to the door frame and stop using Lorient Polyproducts Limited Intumescent mastic.
Mild/stainless steel (backfilled)	Backfilled with sand/cement mortar or concrete - Basic section sizes 70 mm deep by 30 mm wide, with a 15 mm integral doorstep.
Door Gaps	Gaps between door and frame shall be 3mm ± 1mm. Leaf to cill gaps shall not exceed 10 mm.
Glazed Openings	Up to four glazed openings utilising the below approved glazing systems may be included up to a total maximum cut-out area of 0.4 m ² per door leaf or up to six glazed openings utilising the below approved glazing systems may be included up to a total maximum cut-out area of 0.195 m ² per door leaf. All apertures to be factory prepared. No site cutting of apertures is permitted.
Apertures	Margins: No closer than 100 mm to the edge of the door leaf or between apertures Height: 900 mm maximum (cut-out size) Width: 600 mm maximum (cut-out size)

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<p>Glazing systems</p>	<p>Glass: 6 mm thick Georgian Wired Polished Plate/ 5 mm Firelite glass Glazing Seal: Lorient Polyproducts Limited System 90+ Beads: i) Material: Hardwood ii) Dimensions: 20 mm high by 20 mm wide including 5 mm bolection (minimum) iii) Density: 650 kg/m³ iv) Fixing: 50 mm long steel pins at 150 mm centres v) Coating: Beads to be immersed in fire retardant solution referenced SDJY-FRS1</p> <p>Glass: 6 mm thick Georgian Wired Polished Plate Max dimensions: Height: 340 mm maximum Width: 230 mm maximum Glazing Seal: STJ intumescent nominally 12 mm by 2 mm Aperture Liner: 48 mm wide x 6 mm thick calcium silicate Beads: i) Material: calcium silicate ii) Dimensions: 12 mm high by 19 mm wide (minimum) iii) Fixing: 50 mm long steel pins at 100 mm centres</p> <p>Any CERTIFIRE approved glazing system may be utilised subject to the conditions contained within the relevant certificate.</p>						
<p>Supporting construction</p>	<p>The door assemblies are approved to be installed in brick, block, masonry, steel or timber stud of minimum thickness 70mm, providing at least 60 minutes fire resistance.</p>						
<p>Installation</p>	<p>The opening may be lined with softwood or hardwood which shall be continuous and of minimum width, 70 mm. Each door frame jamb to be fixed through to the wall at not less than four points with steel or nylon frame fixings screwed and plugged at maximum 600mm centres and penetrating the wall to at least 50 mm. Architrave is optional with no restrictions on material, size or fixing.</p> <p>Door leaves may be trimmed to fit the frame by the following maximum amounts:</p> <table data-bbox="475 1608 730 1697"> <tr> <td>Stiles (each)</td> <td>3 mm</td> </tr> <tr> <td>Top</td> <td>3 mm</td> </tr> <tr> <td>Bottom</td> <td>5 mm</td> </tr> </table> <p>Note that the maximum door to frame and door to threshold gaps specified shall not be exceeded nor shall the door edge fitted with the CERTIFIRE label be trimmed since removal of the label will invalidate the certification.</p> <p>Fitting to be carried out in accordance with BS 8214: 1990, Table 3.</p>	Stiles (each)	3 mm	Top	3 mm	Bottom	5 mm
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Intumescent Seals	<p>Seals may be interrupted at hinge and latch positions. Smoke seals may be included subject to the conditions contained within the relevant CERTIFIRE certificate for the smoke seal.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 20%;">Doorset Configuration</th> <th style="width: 15%;">Frame</th> <th style="width: 15%;">Position</th> <th style="width: 50%;">Intumescent Specification</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="vertical-align: top;">Single-Acting, Single-Leaf</td> <td rowspan="2" style="vertical-align: top;">Hardwood</td> <td style="vertical-align: top;">Head</td> <td>A single STJ 'S1' graphite based seal of dimensions 38mm wide by 4mm thick to be fitted centrally within the reveal to the frame.</td> </tr> <tr> <td style="vertical-align: top;">Vertical Edges</td> <td>A single STJ 'S1' graphite based seal of dimensions 25mm wide by 4mm thick to be fitted centrally within the reveal to the frame.</td> </tr> <tr> <td style="vertical-align: top;">Steel clad, hardwood core / Steel back-filled</td> <td style="vertical-align: top;">Head & Vertical Edges</td> <td>A single STJ 'S1' graphite based seal of overall dimensions 40mm wide by 6mm thick (intumescent material 38mm by 4mm) to be fitted adjacent to door stop position within the reveal to the frame.</td> </tr> <tr> <td rowspan="2" style="vertical-align: top;">Double-Acting, Single-Leaf</td> <td rowspan="2" style="vertical-align: top;">Hardwood</td> <td style="vertical-align: top;">Head</td> <td>A single STJ 'S1' graphite based seal of dimensions 38mm wide by 4mm thick to be fitted centrally within the reveal to the frame.</td> </tr> <tr> <td style="vertical-align: top;">Vertical Edges</td> <td>A single STJ 'S1' graphite based seal of dimensions 25mm wide by 4mm thick to be fitted centrally within the reveal to the frame.</td> </tr> <tr> <td rowspan="2" style="vertical-align: top;">Double-Acting, Double-Leaf</td> <td rowspan="2" style="vertical-align: top;">Hardwood</td> <td style="vertical-align: top;">Head & Hanging Edges</td> <td>A single STJ 'S1' graphite based seal of dimensions 38mm wide by 4mm thick to be fitted centrally within the frame.</td> </tr> <tr> <td style="vertical-align: top;">Meeting Edges</td> <td>3 No. STJ 'S1' graphite based seals of dimensions 12mm wide by 4mm thick to be fitted. (2 No. within one leaf and 1 No. within opposing leaf edge such that they are not directly opposing.</td> </tr> </tbody> </table>	Doorset Configuration	Frame	Position	Intumescent Specification	Single-Acting, Single-Leaf	Hardwood	Head	A single STJ 'S1' graphite based seal of dimensions 38mm wide by 4mm thick to be fitted centrally within the reveal to the frame.	Vertical Edges	A single STJ 'S1' graphite based seal of dimensions 25mm wide by 4mm thick to be fitted centrally within the reveal to the frame.	Steel clad, hardwood core / Steel back-filled	Head & Vertical Edges	A single STJ 'S1' graphite based seal of overall dimensions 40mm wide by 6mm thick (intumescent material 38mm by 4mm) to be fitted adjacent to door stop position within the reveal to the frame.	Double-Acting, Single-Leaf	Hardwood	Head	A single STJ 'S1' graphite based seal of dimensions 38mm wide by 4mm thick to be fitted centrally within the reveal to the frame.	Vertical Edges	A single STJ 'S1' graphite based seal of dimensions 25mm wide by 4mm thick to be fitted centrally within the reveal to the frame.	Double-Acting, Double-Leaf	Hardwood	Head & Hanging Edges	A single STJ 'S1' graphite based seal of dimensions 38mm wide by 4mm thick to be fitted centrally within the frame.	Meeting Edges	3 No. STJ 'S1' graphite based seals of dimensions 12mm wide by 4mm thick to be fitted. (2 No. within one leaf and 1 No. within opposing leaf edge such that they are not directly opposing.
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Overhead Closers	<p>All unlatched doorsets shall be fitted with a door closer covered by a Warringtonfire Mid-East or CERTIFIRE certificate or be as detailed in WFRC No. C82428. Closers are not essential for fire performance if the doorset incorporates a latch and the leaf is in the closed and fully latched position. A self-closing device may, however, be required to be fitted to satisfy fire regulations and if fitted shall be a Warringtonfire Mid-East or CERTIFIRE approved product. Note: closers with mechanical hold-open mechanisms are not permitted to be used.</p>																									

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Hinges	<p>Number: 3 No. per leaf (minimum)</p> <p>Type: Steel butt, journal supported fixed or loose pin. Any washers or ball bearings to be of steel.</p> <p>Position: 250 mm from the head of the leaf, mid-height, and 250 mm from the base of the door leaf, additional hinges may be utilised between these positions.</p> <p>i) Height - 100 mm (\pm 10 mm)</p> <p>ii) Blade width - 42 mm (\pm 3 mm)</p> <p>iii) Thickness - 3 mm (\pm 0.5 mm)</p> <p>iv) Knuckle dia. - 14 mm (\pm 1 mm)</p> <p>Fixings: Steel screws, minimum 4 No. and no smaller than 5.0 mm diameter by 32 mm long.</p> <p>Intumescent: All hinge blades to be bedded onto 2 mm thick graphite based STJ 'F1' material. Additionally, a single section of 10 mm wide by 2 mm thick graphite intumescent material is to be fitted adjacent to the hinge blade within the reveal to frame such that it extends 10 mm above and below the hinge.</p> <p>Any other CERTIFIRE approved hinges may be utilised subject to the conditions contained within the relevant certificate.</p>
Latches	<p>Lock case dims: 150 mm long by 80 mm deep by 15 mm thick maximum</p> <p>Forend dims: 200 mm long by 25 mm wide maximum</p> <p>Strike plate: 130 mm long by 28 mm wide by 2 mm thick maximum</p> <p>Latch bolt: Steel or material with a melting point greater than 950^oC</p> <p>Handles: No restriction on type or material</p> <p>Position: Shall be fitted at a maximum height of 1025 mm from the spindle to the bottom of the door.</p> <p>Any other CERTIFIRE approved latches or latches as detailed in WFRC No. C82428 may be utilised subject to the conditions contained within the relevant certificate.</p>

Certification is awarded on the basis of initial type testing to BS 476: Part 22: 1987, initial inspection and ongoing surveillance of factory production control, and ongoing compliance with the scheme requirements including the use of labels supplied by Bodycote **warringtonfire**. The currency of the certification may be verified at www.warringtonfire.net/mideast.

Signed for and on behalf of Warrington Certification



Sir Ken Knight
Chairman - Management Council

Issued: 29th June 2009
Valid to: 28th June 2014