

Strebord[®]
General Specifications



Introduction to Strebord[®]

- Strebord[®] 35+, 38+, 44, 54 & Superpan Door Core Materials are purpose made, multi-layer particle boards designed specifically for use in the manufacture of high performance doors but which may also be used for the manufacture of partitioning and other products (e.g. furniture).
- Falcon Panel Products Ltd. are committed to the constant development of the Strebord[®] product in support of its Customers. Strebord[®] has been tested to the requirements of BS DD171 with cycling tests carried out in accordance with PAS23. A maximum 'Severe Duty' performance was achieved (and repeated) under BS DD171 conditions and the test doorsets achieved in excess of half million cycles under PAS 23 conditions.
- Strebord[®] is available as an FSC (*Forest Stewardship Council UK*) approved product with full Chain of Custody certification.
- Strebord[®] is available as an PEFC (*Programme for the Endorsement of Forest Certification*) approved product with full Chain of Custody certification.
- Falcon Panel Products Ltd. have an ongoing BS 476 Pt.22 related fire test programme designed both to satisfy auditing requirements of the 'Q' Mark certification scheme and to increase the scope of application for Strebord[®] based fire rated doorsets. Testing has also been carried out in accordance with BS EN 1634-1 in anticipation of a requirement to satisfy this specification in due course. Due to the exceptional reliability and predictability of Strebord[®] under fire test conditions, Strebord[®] has become a preferred base product for the fire testing 'by others' of door related components. Extensive testing has also been carried out to provide users of Strebord[®] with a wide range of options for meeting sound attenuating performances up to and exceeding Rw.35dB.
- The boards may be worked using standard woodworking tools and machinery.
- The density and finish of this high quality product permits the manufacture of doors and partitions without the necessity for the use of perimeter framing or additional sub-facing materials. Hardwood edge lippings should be applied. These may be limited to the two vertical edges, without detriment to performance, but it is recommended that the lippings are applied to all edges, particularly when used with pivot fixings or in locations where the relative humidity is likely to exceed 80%.
- Wood veneers, plastic laminates and other door facing materials can be applied direct to the core material with minimal preparation. Where painted, the use of paint grade veneers or painting foils is recommended but these are not essential. i.e. when suitably primed, paint can be applied directly to the board faces.
- The use of min. 6mm hardwood lippings of 640Kgs/m³ average density is recommended. The lippings should be selected from kiln dried stocks to minimise the risk of differential movement between the core material and lippings due to shrinkage in the event of moisture loss. The lippings should be bonded to the core using urea formaldehyde resin based or polyurethane based adhesives.
- For fire door applications intumescent seals must be added to the door leaf and / or the frame. The Fire Door Applications Data Section describes the 'Q' Mark approved seals for this purpose.
- When glazed, the glass used for fire doors should be of a type and specification determined by test as suitable for wood fire door applications to the desired level of performance. The glass should be retained in a hardwood beading system complete with intumescent glazing mediums. The beading and intumescent glazing system should be of a design proven by test as suitable for use with the intended glass.
- Reference should be made to BS8214 : 2008 'Code of Practice' in respect of the handling and use of fire doors. Further reference should be made to the A.S.D.M.A. (Architectural & Specialists Door Manufacturers Association) 'Best Practice Guide for Timber Fire Doors' and the Guild of Architectural Ironmongers Code of Practice for the selection and use of hardware for fire doors.

General Specifications

Handling & Storage:

- ⊙ When handling with forklift trucks or other mechanised handling equipment, care should be taken to observe the safety advice and weight restrictions relating to the equipment.
- ⊙ When manually handling, operatives should wear suitable industrial quality gloves to avoid injury, particularly when handling cut boards.
- ⊙ Areas for storing Strebord® should be dry and adequately ventilated such that the board is not subjected to excessive humidity and temperature.
- ⊙ Strebord® should be stored flat in bundles of not more than 20boards. The lower bundle should be stored flat and level on a minimum of 4No. equi-spaced timber bearers with similar bearers used to separate each bundle. A maximum of 5No. bundles per stack is recommended with larger board sizes used for the lower bundles reducing to the smaller boards at the top of the stack.

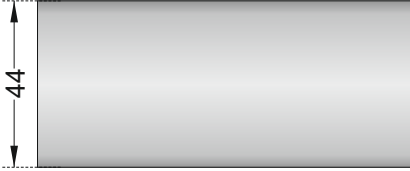
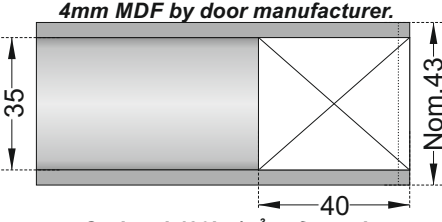
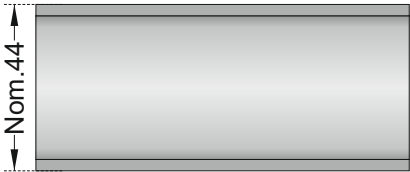

Health & Safety:

- ⊙ Strebord® is bonded using urea formaldehyde resins and may, in a recently pressed state, or when cut or worked, release Formaldehyde gas. The emissions are minor, complying with E1 class of the EU Standard.
- ⊙ Notwithstanding the above, care should be taken to ensure adequate ventilation and control of the working environment to prevent the exposure of persons who are likely to be sensitive to the effects of Formaldehyde. e.g. Asthma sufferers.
- ⊙ When worked, the board is likely to produce wood dust that can act as a skin or respiratory irritant. Adequate ventilation and dust waste extraction should be provided for in the workplace.
NOTE: Refer to COSHH Regulations 1988 and Guidance Note EH40/89.
- ⊙ Ori-nasal masks to BS6016 and eye shields to BS2092 are recommended for use by operatives involved in the handling and working of Strebord®.
- ⊙ The controls introduced to reduce exposure to formaldehyde and wood dust are likely to provide for protection in respect of other aldehydes and ammoniacal compounds that may be produced when machining particle boards.
- ⊙ In the event of exposure resulting in injury to persons the following first aid recommendations are suggested:
 - **Inhalation of Wood Dust:** *Remove person to fresh air. Clean nasal passages.*
 - **Wood dust in eyes:** *Flush eyes with tepid, clean water for 15 minutes.*
 - **Affected by Formaldehyde:** *Remove person to fresh air. Drink copious volumes of water.***NOTE: If no recovery is made, seek immediate medical advice.**

Fire & Explosion:

- ⊙ Strebord® will not explode but airborne dust particles released when working the board could present a fire hazard. Smoking and the use of naked flames should not be permitted in the work areas.
- ⊙ The work area should be provided with an efficient and continuous dust extraction system.
- ⊙ Strebord® burns in a similar manner to natural timber. Normal wood fire fighting procedures should be adopted in the event of fire.

Strebord® door cores referred to in this manual are as follows:

<p>Strebord 44</p> 	<p>Strebord 44® is a homogenous solid sheet of 44mm thick graduated density particleboard (<i>minimum density 530kg/m³ to maximum density 630kg/m³</i>).</p> <p>Where required, (<i>by reference to relevant sections in this manual</i>), door leaves must be lipped in hardwood.</p>
<p>Strebord 35+</p>  <p>4mm MDF by door manufacturer.</p> <p>Optional 430kg/m³ softwood stiles & rails by door manufacturer.</p>	<p>Strebord 35+® Is supplied as a homogenous solid sheet of 35mm thick graduated density particleboard (<i>minimum density 560kg/m³</i>).</p> <p><i>For fire door performance door applications Strebord 35+ door core must be faced by the door manufacturer on both sides with 4mm thickness MDF bonded to the core using an evenly applied cross linked PVA adhesive.</i></p> <p><i>Where required, users may apply min. 40mm wide softwood stiles and rails that must be spot glued to the core with a PVA adhesive before applying the MDF facings. The stiles and rails may be reduced by a maximum of 3mm on all edges for final sizing and squaring before lipping.</i></p> <p>WARNING: Fire door application dimensions are reduced when using stile and rail constructions. See Sections 2 & 4.</p>
<p>Strebord Superpan</p>  <p>Supplied complete with factory applied nominal 3mm tcks. MDF facings</p>	<p>Strebord Superpan® Is supplied as a homogenous solid sheet of 38mm thick graduated density particleboard (<i>minimum density 560kg/m³</i>) complete with factory applied nominal 3mm thick MDF facings. The facing is bled into the core rather than flat bonded, variances can be experienced due to the manufacturing process. Where required, (<i>by reference to relevant sections in this manual</i>), door leaves must be lipped in hardwood.</p>
<p>Strebord 54</p> 	<p>Strebord 54® Is a homogenous solid sheet of 54mm thick graduated density particleboard (<i>minimum density 530kg/m³ to maximum density 630kg/m³</i>).</p> <p>Where required, (<i>by reference to relevant sections in this manual</i>), door leaves must be lipped in hardwood.</p>

Type :	Three layer particleboard specially developed as a high performance door core.
E1:	Complies to E1 Standard.
Raw Material : (Wood Content)	Produced with softwood (Spruce / Pine / Fir) with hardwood (Birch , Chestnut) and using recycled wood based raw materials.
Resin Binder:	Urea Formaldehyde.
Moisture Content:	8% + or - 2% moisture.
Paraffin Wax:	0.2% ~ 0.5% wax.
Total extractable formaldehyde :	No significant or important value for particle boards.
Formaldehyde emissions :	<0.1ppm in the test chamber.
Screw holding :	Spax -54,5x40 750N (any suitable fully threaded particleboard screw of the correct length and size dependent on the size of core required).No significant or important value for particle boards.
Fire :	Tested to BS476 Pt.22 : 1987 Suitable for single & double leaf applications in single or double swing configurations. May be glazed. See fire door application details.
Acoustic Performance :	Extensively tested to the requirements of BS EN ISO 140-3 : 1995 (BS EN ISO 10140 Pt.2) with results expressed as a single weighted index in accordance with BS EN ISO 717-1 : 1997. See Acoustic section.
Sheet size :	44mm Thickness: 2060 x 840mm 2135 x 915mm 2440 x 915mm 2440 x 1220mm 2740 x 915mm 3300 x 1000mm <i>NOTE: Non standard sizes available to special order.</i> Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm
Surface :	Has a precision finish meeting the highest requirements and is suitable as a base for use with a wide range of facing materials including delicate veneers, laminates and thin foils.
Density:	Avg. bulk density = 540 ~ 620kgs/m ³
Weight :	Strebord 44mm weight = Nom. 27kgs/m ²
Machining :	Suitable for use with standard woodworking tools and machinery.
Packaging :	Supplied in packs of 20 boards.
Uses :	Suitable as a highly effective door core for fire performances up to FD30 (BS476 Pt.22) or as a partitioning material. May also be used as a suitable core for the manufacture of doors required to provide for sound attenuating performances. Strebord [®] can be veneered, faced with laminates or painted with minimum preparation. Also available to satisfy FSC specification requirements.

Type :	Three layer particleboard specially developed as a high performance door core.	Strebord® 35+ High quality Door Core Material
E1:	Complies to E1 Standard.	
Raw Material : (Wood Content)	Produced with softwood (Spruce / Pine / Fir) with hardwood (Birch , Chestnut) and using recycled wood based raw materials.	
Resin Binder:	Urea Formaldehyde.	
Moisture Content:	8% + or - 2% moisture.	
Paraffin Wax:	0.2% ~ 0.5% wax.	
Total extractable formaldehyde :	No significant or important value for particle boards.	
Formaldehyde emissions :	<0.1ppm in the test chamber.	
Screw holding :	Spax -54,5x40 750N (any suitable fully threaded particleboard screw of the correct length and size dependent on the size of core required).No significant or important value for particle boards.	
Fire :	Tested to BS476 Pt.22 : 1987 Suitable for single & double leaf applications in single or double swing configurations. May be glazed. See fire door application details.	
Acoustic Performance :	Extensively tested to the requirements of BS EN ISO 140-3 : 1995 with results expressed as a single weighted index in accordance with BS EN ISO 717-1 : 1997. See Acoustic section, Nom 43mm bond up only.	
Sheet size :	35mm Thickness: 2135 x 915mm 2440 x 1220mm <i>NOTE: Non standard sizes available to special order.</i>	
	Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm	
Surface :	Has a precision finish meeting the highest requirements and is suitable as a base for use with a wide range of facing materials including delicate veneers, laminates and thin foils.	
Density:	Avg. bulk density = 570 ~ 630kgs/m ³	
Weight :	Strebord 44mm weight = Nom. 25kgs/m ²	
Machining :	Suitable for use with standard woodworking tools and machinery.	
Packaging :	Supplied in packs of 25 boards.	
Uses :	Suitable as a highly effective door core for fire performances up to FD30 (BS476 Pt.22) or as a partitioning material. May also be used as a suitable core for the manufacture of doors required to provide for sound attenuating performances. Strebord ³⁵ can be veneered, faced with laminates or painted with minimum preparation. Also available to satisfy FSC specification requirements.	

Strebord[®]38+ High quality Door Core Material	Type :	Three layer particleboard specially developed as a high performance door core.
	E1:	Complies to E1 Standard.
	Raw Material : (Wood Content)	Produced with softwood (Spruce / Pine / Fir) with hardwood (Birch , Chestnut) and using recycled wood based raw materials.
	Resin Binder:	Urea Formaldehyde.
	Moisture Content:	8% + or - 2% moisture.
	Paraffin Wax:	0.2% ~ 0.5% wax.
	Total extractable formaldehyde :	No significant or important value for particle boards.
	Formaldehyde emissions :	<0.1ppm in the test chamber.
	Screw holding :	Spax -54,5x40 750N (any suitable fully threaded particleboard screw of the correct length and size dependent on the size of core required).
	Fire :	Tested to BS476 Pt.22 : 1987 Suitable for single & double leaf applications in single or double swing configurations. May be glazed. See fire door application details. Bonded as a core only.
	Acoustic Performance :	Extensively tested to the requirements of BS EN ISO 140-3 : 1995 with results expressed as a single weighted index in accordance with BS EN ISO 717-1 : 1997. See Acoustic section, Nom 46mm bond up only.
	Sheet size :	38mm Thickness: 2135 x 915mm <i>NOTE: Non standard sizes available to special order.</i> Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm
	Surface :	Has a precision finish meeting the highest requirements and is suitable as a base for use with a wide range of facing materials including delicate veneers,laminates and thin foils.
	Density:	Avg. bulk density = 570 ~ 630kgs/M ³
	Weight :	Strebord 38mm weight = Nom. 26kgs/M ²
	Machining :	Suitable for use with standard woodworking tools and machinery.
	Packaging :	Supplied in packs of 25 boards.
Uses :	Suitable as a highly effective door core for fire performances up to FD30 (BS476 Pt.22) or as a partitioning material. May also be used as a suitable core for the manufacture of doors required to provide for sound attenuating performances. Strebord ³⁸ can be veneered, faced with laminates or painted with minimum preparation. Also available to satisfy FSC specification requirements.	

Type :	Three layer particle/MDF board specially developed as a high performance door core with a fine surface.	Strebord® Superpan High quality Door Core Material
E1:	Complies to E1 Standard.	
Raw Material : (Wood Content)	Produced with softwood (Spruce / Pine / Fir) with hardwood (Birch , Chestnut), MDF finings and using recycled wood based raw materials.	
Resin Binder:	Urea Formaldehyde.	
Moisture Content:	8% + or - 2% moisture.	
Paraffin Wax:	0.2% ~ 0.5% wax.	
Total extractable formaldehyde :	No significant or important value for particle boards.	
Formaldehyde emissions :	<0.1ppm in the test chamber.	
Screw holding :	Spax -54,5x40 750N (any suitable fully threaded particleboard screw of the correct length and size dependent on the size of core required).	
Fire :	Tested to BS476 Pt.22 : 1987 Suitable for single & double leaf applications in single or double swing configurations. May be glazed. See fire door application details.	
Acoustic Performance :	Extensively tested to the requirements of BS EN ISO 140-3 : 1995 with results expressed as a single weighted index in accordance with BS EN ISO 717-1 : 1997. See Acoustic section.	
Sheet size :	44mm Thickness: 2135 x 915mm 2440 x 1220mm <i>NOTE: Non standard sizes available to special order.</i> Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm	
Surface :	Has a precision MDF finish meeting the highest requirements and is suitable as a base for use with a wide range of facing materials including delicate veneers, laminates and thin foils.	
Density:	Avg. bulk density = 630kgs/M ³	
Weight :	Superpan 44mm weight = Nom. 27kgs/M ²	
Machining :	Suitable for use with standard woodworking tools and machinery.	
Packaging :	Supplied in packs of 20 boards.	
Uses :	Suitable as a highly effective door core for fire performances up to FD30 (BS476 Pt.22) or as a partitioning material. May also be used as a suitable core for the manufacture of doors required to provide for sound attenuating performances. Strebord Superpan can be veneered, faced with laminates or painted with minimum preparation. Also available to satisfy FSC specification requirements.	

Strebord[®]54

Door Core

General Specification

Strebord[®]54 High quality Door Core Material	Type :	Three layer particleboard specially developed as a high performance door core.
	E1:	Complies to E1 Standard.
	Raw Material : (Wood Content)	Produced with softwood (Spruce / Pine / Fir) with hardwood (Birch , Chestnut) and using recycled wood based raw materials.
	Resin Binder:	Urea Formaldehyde.
	Moisture Content:	8% + or - 2% moisture.
	Paraffin Wax:	0.2% ~ 0.5% wax.
	Total extractable formaldehyde :	No significant or important value for particle boards.
	Formaldehyde emissions :	<0.1ppm in the test chamber.
	Screw holding :	Spax -54,5x40 750N (any suitable fully threaded particleboard screw of the correct length and size dependent on the size of core required).
	Fire :	Tested to BS476 Pt.22 : 1987 Suitable for single & double leaf applications in single or double swing configurations. May be glazed. See fire door application details.
	Acoustic Performance :	Extensively tested to the requirements of BS EN ISO 140-3 : 1995 with results expressed as a single weighted index in accordance with BS EN ISO 717-1 : 1997. See Acoustic section.
	Sheet size :	54mm Thickness: 2135 x 915mm 2440 x 915mm 2440 x 915mm 2740 x 915mm Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm
	Surface :	Has a precision finish meeting the highest requirements and is suitable as a base for use with a wide range of facing materials including delicate veneers, laminates and thin foils.
	Density:	Avg. bulk density = 540 ~ 610kgs/M ³
	Weight :	Strebord 54mm weight = Nom. 34kgs/M ²
	Machining :	Suitable for use with standard woodworking tools and machinery.
Packaging :	Supplied in packs of 16 / 19 boards.	
Uses :	Suitable as a highly effective door core for fire performances up to FD60 (BS476 Pt.22) or as a partitioning material. May also be used as a suitable core for the manufacture of doors required to provide for sound attenuating performances. Strebord ⁵⁴ can be veneered, faced with laminates or painted with minimum preparation. Also available to satisfy FSC specification requirements.	

Other door core products available from Falcon Panel Products Ltd.

Falcon Tectonite® A mineral core based product suitable for the manufacturer of FD90 and FD120 - (BS476 Pt.22) fire rated doorsets. Please refer to our separate Warm Springs technical manual which is available to download online at www.falconpp.co.uk.

Falcon Tri-Sound® - **Series 3** A multi layer chipboard based core providing for excellent acoustic properties for use where sound attenuating performances in excess of Rw.40dB are required (BS EN ISO 140 - 3 / BS EN ISO 717-1). The Tri-Sound® core construction is also suitable for the construction of fire doors with performances up to FD30 (BS476 Pt.22) 1/2hr.

Door Blanks:

'STREDOR'® - Solid softwood core door blanks with either MDF or Chipboard faces. FSC certified.

'FLAMEBREAK'® - Indonesian ultra light weight hardwood core door blanks.

'SENTRY' - Plywood faced hardwood core door blanks.

'SAFEGUARD' - Solid hardwood core door blanks. Sound attenuating performance.

'BLANKFORT'® - Solid softwood core door blanks with either MDF or Chipboard faces.

For further information regarding these exceptional high performance door core products please contact:

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