



Evolution Fire Doors

DATA SHEET

Evolution Doors provide fire protection between building compartments aiding reduced spread of fire, smoke and harmful gasses allowing for safer means of escape in the event of a fire.

Data contained within the documentation is accurate in its declaration of Fire Resisting Performance.

All materials used to construct and finish a EVO30 or EVO60 Fire rated door are backed up by sufficient data and testing provided by the likes of The Certifier Warrington Fire and British Standard EN13501-1 (Fire Classification of Construction Products and Building Elements)

All materials are constructed and fitted in line with the requirements of the appropriate product specifications, installation methods and guidelines to ensure that all products fulfil their displayed Fire Resisting Status.

Fire Door	Fire Rating	Solid Timber Cores
EVO30	30 Minutes	Stredor® 44mm Stredor® 54mm Strebord® 44mm Strebord® 54mm
EVO60	60 Minutes	Stredor® 54mm Strebord® 54mm

*See below for full door specification details & data variations



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Here at Evolution, we are proud to have obtained all our accreditations ensuring that we are providing the best of services and safety.

- ISO9001
- ISO14001
- ISO45001

- British Woodworking Federation
- IFC
- BMTRADA Maintenance
- Chas/ Chas Elite
- Firas

To find more details about our accreditations, visit our website: info@evolution-bs.co.uk

EVO Fire Doors Timber – Falcon Timber

Stredor® – Solid Timber Door Cores:

Stredor® is a lightweight, solid timber door core available laminate with Beech, EV or MDF faces. Stredor® has been extensively tested to BS 476: Part 22 for both FD30 & FD60, has security evidence to PAS24: 2016 and is suitable for both internal and external applications.

Stredor® 44 & 54 Performance Summary									
Door Variable	Composition	Thickness (mm)	Fire Rating	Application	Certification & Standard				
					Certifire	Q Mark	IFCC	DD171/BS EN 1192	BS EN 13986
Stredor® 44	Solid Timber	44mm	FD30	Internal & External	Yes	Yes	No	No	E1
Stredor® 54	Solid Timber	54mm	FD30 FD60	Internal & External	No	Yes	No	No	E1

Leaf Size Variables – Stredor® 44 30 Minute Performance – Q Mark							
Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	3090mm	1000mm	1275mm	2450mm	1 No 20x4	1 No 20x4	–
ULSASD	3040mm	1000mm	1250mm	2450mm	1 No 20x4	1 No 20x4	–
LSADD	2990mm	1000mm	1225mm	2450mm	1 No 20x4	1 No 20 4	2 No 10x4
ULSADD	2940mm	1000mm	1200mm	2450mm	1 No 20x4	1 No 20 4	2 No 10x4
DASD	3040mm	1000mm	1250mm	2450mm	1 No 20x4	1 No 20 4	-
DADD	2940mm	1000mm	1200mm	2450mm	1 No 20x4	1 No 20 4	2 No 10x4

Leaf Size Variables – Stredor® 44 30 Minute Performance – Certifire							
Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2947mm	1006mm	1212mm	2447mm	1 x No 15x4	1 No 15x4	-
ULSASD	2947mm	1006mm	1212mm	2447mm	1 x No 15x4	1 No 15x4	-
LSADD	2947mm	1062mm	1250mm	2504mm	1 x No 15x4	1 No 15x4	2 No 10x4
ULSADD	2947mm	1062mm	1250mm	2504mm	1 x No 15x4	1 No 15x4	2 No 10x4

Leaf Size Variables – Stredor® 54 PLY Faces 30 Minute Performance – Q-Mark							
Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	3400mm	952mm	1452mm	2400mm	2 x No 15x4	2 No 15x4	-
ULSASD	3400mm	952mm	1452mm	2400mm	2 x No 15x4	2 No 15x4	-
LSADD	3400mm	952mm	1452mm	2400mm	2 x No 15x4	2 No 15x4	2 No 15x4
ULSADD	3400mm	952mm	1452mm	2400mm	2 x No 15x4	2 No 15x4	2 No 15x4
DASD	3400mm	952mm	1452mm	2400mm	2 x No 15x4	2 No 15x4	-
DADD	3400mm	952mm	1452mm	2400mm	2 x No 15x4	2 No 15x4	-

Leaf Size Variables – Stredor® 54 PLY Faces 60 Minute Performance – Q-Mark							
Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2384mm	923mm	1036mm	2145mm	2 x No 15x4	2 No 15x4	-
ULSASD	2334mm	923mm	1011mm	2145mm	2 x No 15x4	2 No 15x4	-
LSADD	2284mm	923mm	986mm	2145mm	2 x No 15x4	2 No 15x4	2 No 15x4
ULSADD	2234mm	923mm	961mm	2145mm	2 x No 15x4	2 No 15x4	2 No 15x4
DASD	2334mm	923mm	1011mm	2145mm	2 x No 15x4	2 No 15x4	-
DADD	2334mm	923mm	961mm	2145mm	2 x No 15x4	2 No 15x4	2 No 15x4

Leaf Size Variables – Stredor® 54 MDF Faces 30 Minute Performance – Q-Mark							
Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	3400mm	927mm	1350mm	2400mm	2 x No 15x4	2 No 15x4	-
ULSASD	3400mm	927mm	1325mm	2400mm	2 x No 15x4	2 No 15x4	-
LSADD	3350mm	927mm	1300mm	2400mm	2 x No 15x4	2 No 15x4	2 No 15x4
ULSADD	3300mm	927mm	1275mm	2400mm	2 x No 15x4	2 No 15x4	2 No 15x4
DASD	3400mm	927mm	1325mm	2400mm	2 x No 15x4	2 No 15x4	-
DADD	3300mm	927mm	1275mm	2400mm	2 x No 15x4	2 No 15x4	2 No 15x4

Leaf Size Variables – Stredor® 54 MDF Faces 60 Minute Performance – Q-Mark

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2690mm	927mm	1056mm	2400mm	2 x No 15x4	2 No 15x4	-
ULSASD	2640mm	927mm	1031mm	2400mm	2 x No 15x4	2 No 15x4	-
LSADD	2590mm	927mm	1006mm	2400mm	2 x No 15x4	2 No 15x4	2 No 15x4
ULSADD	2540mm	927mm	981mm	2400mm	2 x No 15x4	2 No 15x4	2 No 15x4
DASD	2640mm	927mm	1031mm	2400mm	2 x No 15x4	2 No 15x4	-
DADD	2540mm	927mm	981mm	2400mm	2 x No 15x4	2 No 15x4	2 No 15x4

Stredor® 44

Acoustic Performance						
Configurations	Acoustic Seals				Glass Type	dB(RW) Rating
	Jambs	Head	M/S	Threshold		
Single Flush	STS 1009	STS 1009		STS 422	-	30dB
Single Glazed	STS 1009	STS 1009		STS 422	6mm	31dB
Pair Flush	STS 1009	STS 1009	STS 104SBS	STS 422	-	30dB
Pair Glazed	STS 1009	STS 1009	STS 104SBS	STS 422	6mm	33dB

Stredor® 54

Acoustic Performance						
Configurations	Acoustic Seals				Glass Type	dB(RW) Rating
	Jambs	Head	M/S	Threshold		
Single Flush	STS 1009	STS 1009		STS 422	-	37dB
Single Glazed	STS 1009	STS 1009		STS 422	6mm	37dB
Pair Flush	STS 1009	STS 1009	STS 154SBS	STS 422	-	35dB
Pair Glazed	STS 1009	STS 1009	STS 154SBS	STS 422	6mm	35dB

Strebord® – Particleboard Door Cores:

Strebord® particleboard is highly utilised for both 35mm & 44mm FD30 and 54mm FD60 fire-rated, as well as non-fire rated door cores. They are very robust and manufactured to close tolerances to suit modern joinery processes.

Stredor® 44 & 54 Performance Summary									
Door Variable	Composition	Thickness (mm)	Fire Rating	Application	Certification & Standard				
					Certifire	Q Mark	IFCC	DD171/BS EN 1192	BS EN 13986
Strebord® 35	Particleboard	35mm	FD30	Internal	No	Yes	No		E1
Strebord® 44	Particleboard	44mm	FD30	Internal	Yes	Yes	Yes	Yes	E1
Strebord® 54	Particleboard	54mm	FD30 FD60	Internal	Yes	Yes	Yes	Yes	E1

Leaf Size Variables – Strebord® 35 30 Minute Performance – Q-Mark							
Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2349mm	915mm	1017mm	2135mm	1 x No 15x4	1 No 15x4	-
ULSASD	2299mm	915mm	992mm	2135mm	1 x No 15x4	1 No 15x4	-
LSADD	2249mm	915mm	967mm	2135mm	1 x No 15x4	1 No 15x4	1 No 15x4
ULSADD	2199mm	915mm	942mm	2135mm	1 x No 15x4	1 No 15x4	1 No 15x4

**Leaf Size Variables – Strebor® 44 30 Minute Performance – Q-Mark
Seal Manufacturer: Lorient Polyproducts Ltd**

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2925mm	1072mm	1161mm	2700mm	2 No 10x4	2 No 10x4	
LSASD	2925mm	1072mm	1161mm	2700mm	1 No 15x4	1 No 15x4	
LSASD	3223mm	915mm	1062mm	2800mm	1 No 20x4	1 No 20x4	
LSASD (PVC Encapsulated)	2850mm	900mm	1225mm	2100mm	Any Above	Any Above	
LSASD (Multipoint Lock)	2649mm	1048mm	1153mm	2408mm	2 No 10x4	2 No 10x4	
LSASD+OP	-	-	-	-	-	-	-
ULSASD	2699mm	926mm	1053mm	2399mm	2 No 10x4	2 No 10x4	
ULSASD	2699mm	926mm	1053mm	2399mm	1 No 15x4	1 No 15x4	
ULSASD	3713mm	926mm	1037mm	2800mm	1 No 20x4	1 No 20x4	
ULSASD (PVC Encapsulated)	2850mm	900mm	1225mm	2100mm	Any Above	Any Above	
ULSASD+OP	-	-	-	-	-	-	-
LSASD	2649mm	926mm	1028mm	2399mm	2 No 10x4	2 No 10x4	2 No 10x4
LSASD	2649mm	926mm	1028mm	2399mm	1 No 15x4	1 No 15x4	2 No 10x4
LSASD	2649mm	926mm	1028mm	2399mm	1 No 20x4	1 No 20x4	2 No 10x4
LSASD (PVC Encapsulated)	2800mm	900mm	1200mm	2100mm	1@15x4 or 1@20x4	1@15x4 or 1@20x4	2 No 10x4
LSASD+OP	-	-	-	-	-	-	-
DASD	2699mm	926mm	1053mm	2399mm	2 No 10x4	2 No 10x4	2 No 10x4
DASD	2699mm	926mm	1053mm	2399mm	1 No 15x4	1 No 15x4	2 No 10x4
DASD	3713mm	915mm	1037mm	2800mm	1 No 20x4	1 No 20x4	2 No 10x4
DASD (PVC Encapsulated)	2850mm	900mm	1225mm	2100mm	1@15x4 or 1@20x4	1@15x4 or 1@20x4	2 No 10x4
DASD+OP	-	-	-	-	-	-	-
DADD	2599mm	926mm	1003mm	2399mm	2 No 10x4	2 No 10x4	2 No 10x4
DADD	2599mm	926mm	1003mm	2399mm	1 No 15x4	1 No 15x4	2 No 10x4
DADD	2599mm	926mm	1003mm	2399mm	1 No 20x4	1 No 20x4	2 No 10x4
DADD (PVC Encapsulated)	2800mm	900mm	1200mm	2100mm	1@15x4 or 1@20x4	1@15x4 or 1@20x4	2 No 10x4
DADD+OP	-	-	-	-	-	-	-

Leaf Size Variables – Strebord® 44 30 Minute Performance – IFC
Seal Manufacturer: Lorient Polyproducts Ltd

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2641mm	794mm	1057mm	2114mm	1 No 10x4	1 No 10x4	-
LSASD	3225mm	921mm	1215mm	2636mm	1@15x4 or 2@10x4	1@15x4 or 2@10x4	-
LSASD+OP	2778mm	833mm	1111mm	2222mm	1 No 15x4	2 No 15x4	-
ULSASD	2590mm	778mm	1036mm	2073mm	1 No 10x4	1 No 10x4	-
ULSASD	3162mm	903mm	1192mm	2582mm	1@15x4 or 2@10x4	1@15x4 or 2@10x4	-
ULSASD+OP	2724mm	817mm	1089mm	2079mm	1 No 15x4	2 No 15x4	-
LSADD	2383mm	843mm	998mm	2072mm	1 No 10x4	1 No 10x4	2 No 10x4
LSADD	2926mm	975mm	1103mm	2669mm	1@15x4 or 2@10x4	1@15x4 or 2@10x4	2 No 10x4
LSADD+OP	2433mm	858mm	1016mm	2117mm	1 No 15x4	2 No 15x4	2 No 10x4
ULSADD	2359mm	835mm	988mm	2052mm	1 No 10x4	1 No 10x4	2 No 10x4
ULSADD	2897mm	965mm	1092mm	2643mm	1@15x4 or 2@10x4	1@15x4 or 2@10x4	2 No 10x4
ULSADD+OP	2409mm	850mm	1006mm	2096mm	1 No 15x4	2 No 15x4	2 No 10x4

Leaf Size Variables – Strebord® 44 30 Minute Performance – Certifire
Seal Manufacturer: Lorient Polyproducts Ltd

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2540mm	1165mm	1165mm	2540mm	1 No 10x4	1 No 10x4	-
LSASD	3111mm	915mm	1016mm	2800mm	1 No 15x4	1 No 15x4	-
LSASD	2803mm	1072mm	1113mm	2700mm	1 No 15x4	1 No 15x4	-
LSASD+OP	-	-	-	-	-	-	-
ULSASD	2540mm	1165mm	1165mm	2540mm	1 No 10x4	1 No 10x4	-
ULSASD	3111mm	915mm	1016mm	2800mm	1 No 15x4	1 No 15x4	-
ULSASD+OP	-	-	-	-	-	-	-
LSADD	2600mm	1152mm	2600mm	1152mm	1 No 10x4	1 No 10x4	2 No 10x4
LSADD	2635mm	999mm	1165mm	2259mm	1 No 15x4	1 No 15x4	1 No 15x4
LSASD (Rebated m/s)	2600mm	1081mm	1150mm	2440mm	1 No 10x4	1 No 20x4	1 No 15x4
LSADD+OP	-	-	-	-	-	-	-
ULSADD	2600mm	1152mm	2600mm	1152mm	1 No 10x4	1 No 10x4	2 No 10x4
ULSADD	2635mm	999mm	1165mm	2259mm	1 No 15x4	1 No 15x4	1 No 15x4
LSASD (Rebated m/s)	2600mm	1081mm	1150mm	2440mm	1 No 10x4	1 No 20x4	1 No 15x4
ULSADD+OP	-	-	-	-	-	-	-

**Leaf Size Variables – Strebor® 44 30 Minute Performance – Q-Mark
Seal Manufacturer: Pyroplex Ltd**

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2890mm	932mm	1271mm	2135mm	1 No 10x4	1 No 10x4	-
LSASD	3159mm	915mm	1204mm	2440mm	2 No 10x4	2 No 10x4	-
LSASD	3159mm	915mm	1204mm	2440mm	1 No 15x4	1 No 15x4	-
LSASD	3159mm	915mm	1204mm	2440mm	1 No 20x4	1 No 20x4	-
LSASD (Hardwood/MDF Frame Only)	3365mm	915mm	1280mm	2442mm	2@10, 1@15 or 1@20x4	2@10, 1@15 or 1@20x4	-
LSASD (Over-rebated)	2466mm	955mm	1096mm	2155mm	2 No 10x4	2 No 10x4	-
LSASD (Multipoint Lock)	3247mm	1046mm	1412mm	2405mm	2 No 10x4	2 No 10x4	-
LSASD+OP	-	-	-	-	-	-	-
ULSASD	2840mm	932mm	1246mm	2135mm	1 No 10x4	1 No 10x4	-
ULSASD	3109mm	915mm	1179mm	2440mm	2 No 10x4	2 No 10x4	-
ULSASD	3109mm	915mm	1179mm	2440mm	1 No 15x4	1 No 15x4	-
ULSASD	3109mm	915mm	1179mm	2440mm	1 No 20x4	1 No 20x4	-
ULSASD (Hardwood/MDF Frame Only)	3315mm	915mm	1255mm	2442mm	2@10, 1@15 or 1@20x4	2@10, 1@15 or 1@20x4	-
ULSASD (Over-rebated)	2416mm	955mm	1071mm	2155mm	2 No 10x4	2 No 10x4	-
ULSASD+OP	-	-	-	-	-	-	-
LSADD	2790mm	932mm	1221mm	2135mm	1 No 10x4	1 No 10x4	
LSADD	3059mm	915mm	1154mm	2440mm	2 No 10x4	2 No 10x4	
LSADD	3059mm	915mm	1154mm	2440mm	1 No 15x4	1 No 15x4	
LSADD	3059mm	915mm	1154mm	2440mm	1 No 20x4	1 No 20x4	
LSADD (Hardwood/MDF Frame Only)	3265mm	915mm	1230mm	2442mm	2@10, 1@15 or 1@20x4	2@10, 1@15 or 1@20x4	
LSADD (Over-rebated)	-	-	-	-	-	-	-
LSADD+OP	-	-	-	-	-	-	-
ULSADD	2740mm	932mm	1196mm	2135mm	1 No 10x4	1 No 10x4	2 No 10x4
ULSADD	3009mm	915mm	1129mm	2440mm	2 No 10x4	2 No 10x4	2 No 10x4
ULSADD	3009mm	915mm	1129mm	2440mm	1 No 15x4	1 No 15x4	2 No 10x4
ULSADD	3009mm	915mm	1129mm	2440mm	1 No 20x4	1 No 20x4	2 No 10x4
ULSADD (Hardwood/MDF Frame Only)	3215mm	915mm	1205mm	2442mm	2@10, 1@15 or 1@20x4	2@10, 1@15 or 1@20x4	2 No 10x4
ULSADD (Over-rebated)	-	-	-	-	-	-	-
ULSADD+OP	-	-	-	-	-	-	-

Leaf Size Variables – Strebord® 44 30 Minute Performance – Q-Mark
Seal Manufacturer: Pyroplex Ltd

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
DASD	2840mm	932mm	1246mm	2135mm	1 No 10x4	1 No 10x4	-
DASD	3109mm	915mm	1179mm	2440mm	2 No 10x4	2 No 10x4	-
DASD	3109mm	915mm	1179mm	2440mm	1 No 15x4	1 No 15x4	-
DASD	3109mm	915mm	1179mm	2440mm	1 No 20x4	1 No 20x4	-
DASD (Hardwood/MDF Frame Only)	3315mm	915mm	1255mm	2442mm	2@10, 1@15 or 1@20x4	2@10, 1@15 or 1@20x4	-
DASD (Over-rebated)	-	-	-	-	-	-	-
DASD+OP	-	-	-	-	-	-	-
DADD	2740mm	932mm	1196mm	2135mm	1 No 10x4	1 No 10x4	-
DADD	3009mm	915mm	1129mm	2440mm	2 No 10x4	2 No 10x4	-
DADD	3009mm	915mm	1129mm	2440mm	1 No 15x4	1 No 15x4	-
DADD	3009mm	915mm	1129mm	2440mm	1 No 20x4	1 No 20x4	-
DADD (Hardwood/MDF Frame Only)	3215mm	915mm	1205mm	2442mm	2@10, 1@15 or 1@20x4	2@10, 1@15 or 1@20x4	-
DADD (Over-rebated)	-	-	-	-	-	-	-
DADD+OP	-	-	-	-	-	-	-

Leaf Size Variables – Strebord® 44 30 Minute Performance – Q-Mark
Seal Manufacturer: Pyroplex Ltd

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	3225mm	921mm	1215mm	2636mm	1 No 15x4	1 No 15x4	-
LSASD+OP	2778mm	833mm	1111mm	2222mm	1 No 15x4	2 No 15x4	-
ULSASD	3162mm	903mm	1102mm	2582mm	1 No 15x4	1 No 15x4	-
ULSASD+OP	2724mm	817mm	1089mm	2179mm	1 No 15x4	2 No 15x4	-
LSADD	2912mm	970mm	1099mm	2655mm	1 No 15x4	1 No 15x4	2 No 10x4
LSADD+OP	2332mm	785mm	924mm	2052mm	1 No 15x4	1 No 15x4	2 No 10x4
ULSADD	2884mm	961mm	1088mm	2629mm	1 No 15x4	2 No 15x4	2 No 10x4
ULSADD+OP	2309mm	77mm	915mm	2032mm	1 No 15x4	1 No 15x4	2 No 10x4

Leaf Size Variables – Strebor® 44 30 Minute Performance – Q-Mark
Seal Manufacturer: Pyroplex Ltd

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	3111mm	915mm	1016mm	2800mm	1 No 10x4	1 No 10x4	-
LSASD+OP	3111mm	915mm	1016mm	2800mm	1 No 10x4	1 No 15x4	-
ULSASD	3111mm	915mm	1016mm	2800mm	1 No 10x4	1 No 10x4	-
ULSASD+OP	3111mm	915mm	1016mm	2800mm	1 No 10x4	1 No 15x4	-
LSADD	2942mm	1165mm	1165mm	2942mm	1 No 10x4	1 No 10x4	2 No 10x4
LSADD+OP	2635mm	999mm	11165mm	2259mm	1 No 10x4	1 No 15x4	2 No 10x4
ULSADD	2942mm	1165mm	1165mm	2942mm	1 No 10x4	1 No 10x4	2 No 10x4
ULSADD+OP	2635mm	999mm	1165mm	2259mm	1 No 10x4	1 No 15x4	2 No 10x4

Leaf Size Variables – Strebor® 44 30 Minute Performance – Q-Mark
Seal Manufacturer: Sealmaster

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2393mm	926mm	1094mm	2039mm	1 No 9.5x7.5	1 No 9.5x7.5	-
LSASD+OP	-	-	-	-	-	-	-
ULSASD	2343mm	926mm	1069mm	2039mm	1 No 9.5x7.5	1 No 9.5x7.5	-
ULSASD+OP	-	-	-	-	-	-	-
LSADD	2293mm	926mm	1069mm	2039mm	1 No 9.5x7.5	1 No 9.5x7.5	1 No 9.5x7.5
LSADD+OP	-	-	-	-	-	-	-
ULSADD	2243mm	926mm	1019mm	2039mm	1 No 9.5x7.5	1 No 9.5x7.5	1 No 9.5x7.5
ULSADD+OP	-	-	-	-	-	-	-
DASD	2343mm	926mm	1069mm	2039mm	1 No 9.5x7.5	1 No 9.5x7.5	-
DASD+OP	-	-	-	-	-	-	-
DADD	2243mm	926mm	1019mm	2039mm	1 No 9.5x7.5	1 No 9.5x7.5	-
DADD+OP	-	-	-	-	-	-	-

Strebord® 54 60 Minute Performance – Q-Mark

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	3165mm	952mm	1369mm	2300mm	2 No 15x4	2 No 15x4	-
LSASD	2814mm	1386mm	1386mm	2814mm	2 No 15x4	2 No 15x4	-
LSASD+OP	2405mm	915mm	1055mm	2120mm	1 No 15x4	1@25x4 &@15x4	-
ULSASD	3105mm	927mm	1060mm	2757mm	2 No 15x4	2 No 15x4	-
ULSASD	2478mm	1234mm	1246mm	2454mm	2 No 15x4	2 No 15x4	-
ULSASD+OP	2355mm	915mm	1055mm	2120mm	1 No 15x4	1@25x4 &@15x4	-
LSADD	3065mm	952mm	1269mm	2300mm	2 No 15x4	2 No 15x4	-
LSADD+OP	2205mm	915mm	955mm	2120mm	2 No 15x4	1@25x4 &@15x4	2 No 15x4
ULSADD	3005mm	927mm	1010mm	2757mm	2 No 15x4	2 No 15x4	2 No 15x4
ULSADD	2260mm	925mm	1025mm	2040mm	2 No 15x4	2 No 15x4	2 No 15x4
ULSADD+OP	2155mm	915mm	930mm	2120mm	2 No 15x4	1@25x4 &@15x4	2 No 15x4
DASD	3016mm	928mm	1021mm	2742mm	2 No 15x4	2 No 15x4	-
DASD	2478mm	1234mm	1246mm	2454mm	2 No 15x4	2 No 15x4	-
DASD+OP	2355mm	915mm	1030mm	2120mm	1 No 15x4	1@25x4 &@15x4	-
DADD	3005mm	927mm	1010mm	2757mm	2 No 15x4	2 No 15x4	2 No 15x4
DADD	2260mm	925mm	1025mm	2040mm	2 No 15x4	2 No 15x4	2 No 15x4
DADD+OP	2155mm	915mm	930mm	2120mm	2 No 15x4	1@25x4 &@15x4	2 No 15x4

Strebord® 54 60 Minute Performance – IFC

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	3180mm	908mm	1117mm	2763mm	2 No 15x4	2@15x4 &1@15x4	-
LSASD+OP	3133mm	895mm	1107mm	2709mm	2 No 15x4	1@38x4 &1@15x4	-
ULSASD	3118mm	891mm	1102mm	2696mm	2 No 15x4	2@15x4 &1@15x4	-
ULSASD+OP	3072mm	877mm	1085mm	2656mm	2 No 15x4	1@38x4 &1@15x4	-
LSADD	2885mm	961mm	1018mm	2773mm	2 No 15x4	2@15x4 &1@15x4	2 No 15x4
LSADD+OP	2802mm	934mm	994mm	2681mm	2 No 15x4	1@38x4 &1@15x4	2 No 15x4
ULSADD	2857mm	952mm	1013mm	2733mm	2 No 15x4	2@15x4 &1@15x4	2 No 15x4
ULSADD+OP	2775mm	825mm	984mm	2655mm	2 No 15x4	1@38x4 &1@15x4	2 No 15x4

Strebor® 54 60 Minute Performance – Certifire

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	3242mm	1035mm	1177mm	2850mm	2 No 15x4	2 No 15x4	-
LSASD+OP	2249mm	935mm	985mm	2135mm	2 No 15x4	1@15x4 &1@25x4	-
ULSASD	2517mm	1234mm	1265mm	2454mm	2 No 15x4	2 No 15x4	-
ULSASD+OP	2249mm	935mm	985mm	2135mm	2 No 15x4	1@15x4 &1@25x4	-
LSADD	3257mm	936mm	1106mm	2757mm	2 No 15x4	2 No 15x4	2 No 15x4
LSADD+OP	2249mm	935mm	985mm	2135mm	2 No 15x4	1@15x4 &1@25x4	2 No 15x4
ULSADD	2249mm	935mm	985mm	2135mm	2 No 15x4	2 No 15x4	2 No 15x4
ULSADD+OP	2249mm	935mm	985mm	2135mm	2 No 15x4	1@15x4 &1@25x4	2 No 15x4

Strebor® 44 Panelled 30 Minute Performance – Q-Mark

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2979mm	932mm	1310mm	2135mm	1 No 20x4	1 No 20x4	-
ULSASD	2929mm	932mm	1285mm	2135mm	1 No 20x4	1 No 20x4	--
LSADD	2879mm	932mm	1260mm	2135mm	1 No 20x4	1 No 20x4	1 No 20x4
ULSADD	2829mm	932mm	1235mm	2135mm	1 No 20x4	1 No 20x4	1 No 20x4
DASD	2929mm	932mm	1285mm	2135mm	1 No 20x4	1 No 20x4	-
DADD	2829mm	932mm	1235mm	2135mm	1 No 20x4	1 No 20x4	1 No 20x4

Strebor® 54 Panelled 30 Minute Performance – Q-Mark

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2979mm	932mm	1310mm	2135mm	1 No 20x4	1 No 20x4	-
ULSASD	2929mm	932mm	1285mm	2135mm	1 No 20x4	1 No 20x4	--
LSADD	2879mm	932mm	1260mm	2135mm	1 No 20x4	1 No 20x4	1 No 20x4
ULSADD	2829mm	932mm	1235mm	2135mm	1 No 20x4	1 No 20x4	1 No 20x4
DASD	2929mm	932mm	1285mm	2135mm	1 No 20x4	1 No 20x4	-
DADD	2829mm	932mm	1235mm	2135mm	1 No 20x4	1 No 20x4	1 No 20x4

Strebord® 54 Panelled 30 Minute Performance – Q-Mark

Configurations	Leaf Sizes				Seal Arrangements		
	MAX Height	At Width	MAX Width	At Height	Jambs	Head	M/S
LSASD	2040mm	928mm	928mm	2040mm	2 No 15x4	2 No 15x4	-

Stredor® 44**Acoustic Performance**

Configurations	Acoustic Seals				Glass Type	dB(RW) Rating
	Jambs	Head	M/S	Threshold		
Single Flush	FAS35	FAS35	-	FAS45	-	33dB
Single Flush	LAS1212	LAS1212	-	LAS8001 si	-	32dB
Single Flush	NOR710	NOR710	-	NOR810 & NOR650	-	33dB
Single Flush	Harmony Twin Flipper	Harmony Twin Flipper	-	Harmony HID	-	33dB
Single Flush	STS 1009	STS 1009	-	STS 422	-	33dB
Single Glazed	FAS35	FAS35	-	FAS45	7mm Pyroguard	35dB
Single Glazed	LAS1212K	LAK1212K	-	LAS8001 si	15mm Pyrostop	35dB
Single Glazed	ACS-1 & 15x4 PSA	ACS-1 & 15x4 PSA	-	1703 ACU	7mm Pyrodur	35dB
Single Glazed	NOR710	NOR710	-	NOR810 & NOR650	15mm Pyrostop	35dB
Pair Flush	NOR710	NOR710	NOR710	NOR810	-	33dB
Pair Flush	LAS1011	LAS1011	LAS1011 (x2)	LAS8001 si	-	32dB
Pair Flush	ST1009	ST1009	STS 104SBS Single-blade seal	STA422	-	31dB
Pair Glazed	FAS39	FAS39	DGS Astragal Seal & DGS Intumescent/ Twin Seal	FAS45	15mm Pyrostop	35dB
Pair Glazed	LAS1212 & LAS1011	LAS1212 & LAS1011	LP1004DS (x2)	LAS8001 si	15mm Pyroguard	35dB
Pair Glazed	ACS-1 & PSSSA Twin 15x4	ACS-1 & PSSSA Twin 15x4	PSSA twin 15x4 & Astragal 7061	420S	15mm Pyrostop	35dB
Pair Glazed	NOR710	NOR710	NOR755 & NOR720	NOR850 & NOR615	15mm Pyrostop	35dB

Stredor® 54						
Acoustic Performance						
Configurations	Acoustic Seals				Glass Type	dB(RW) Rating
	Jambs	Head	M/S	Threshold		
Single Flush	STS 1009	STS 1009	-	STS 422	-	-
Single Flush	LP1504DS & LAS1212	LP1504DS & LAS1212	-	LAS8001 si	-	-
Single Flush	NOR710 & NOR720	NOR710 & NOR720	-	NOR810	-	-
Single Glazed	FAS35	FAS35	-	FAS45	11.4mm Pyroguard	-
Single Glazed	ACS-1 & 15 x 4 PSA	ACS-1 & 15 x 4 PSA	-	1703-ACU	15mm Pyrostop	-
Single Glazed	NOR710	NOR710	-	NOR810	7mm Pyrobelite	-
Single Glazed	LP15044DS & LAS1212	LP15044DS & LAS1212	-	LAS8001 si	11mm Pyroguard	-
Single Glazed	STS 1009	STS 1009	-	ST422	15mm Glass	-
Pair Flush	FAS35	FAS35	FAS35	FAS45	-	-
Pair Flush	LP15044DS & LAS1212	LP15044DS & LAS1212	LP1504 & LP1504DS	LAS8001 si	-	-
Pair Flush	NOR710	NOR710	NOR720	NOR810	-	-
Pair Flush	STS 1009	STS 1009	STS 154SBS	STS 422	-	-
Pair Glazed	FAS35	FAS35	15x4 Dual Seal	FAS45	12mm Pyrobelite	-
Pair Glazed	NOR710	NOR710	Nor720	NOR720 & NOR615	10mm Pyrostop	-
Pair Glazed	LP1504DS x 2	LP1504DS x 2	LP1504DS x 2	LAS801 si	15mm Pyroguard	-
Pair Glazed	ST1009	ST1009	STS 154SBS Single-blade seal	ST422	15mm Glass	-

Door Seals – Exitex

Exitex Intumescent Seals provide a Fire & Smoke seal for fire rated timber door sets and are suitable for both single and double doors. Exitex Seals are Certifire approved and have been Fire Tested to BS 476: Part 22, BS EN 1634-1 and smoke Tested to BS 476: Part 31.1.

Fire Only -

Profile Size - 10mm x4mm	
Type	Fire Only
Fire Rating	30 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 15mm x4mm	
Type	Fire Only
Fire Rating	30/60 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 20mm x4mm	
Type	Fire Only
Fire Rating	60 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 25mm x4mm	
Type	Fire Only
Fire Rating	90 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Fire & Smoke Seal: Brush Seal

Profile Size - 10mm x4mm	
Type	Fire & Smoke
Fire Rating	30 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 15mm x4mm	
Type	Fire & Smoke
Fire Rating	30/ 60 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 20mm x4mm	
Type	Fire & Smoke
Fire Rating	60 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 25mm x4mm	
Type	Fire & Smoke
Fire Rating	90 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Exiblade Seals –

Exiblade Single and twin Flipper Seals provide a fire, smoke and acoustic seal for fire rated timber door sets and are suitable for both single and double doors. Exiblade Seals are Certifire approved and have been Fire Tested to BS 476: Part 22, BS EN 1634-1, Smoke Tested to BS 476: Part 31.1 and acoustically tested up to 44dB to BS EN ISO 10140-2 : 2010.

Profile Size - 10mm x4mm	
Type	Fire & Smoke
Fire Rating	30 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 15mm x4mm	
Type	Fire & Smoke
Fire Rating	30/60 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 20mm x4mm	
Type	Fire & Smoke
Fire Rating	60 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 25mm x4mm	
Type	Fire & Smoke
Fire Rating	90 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Exiblade – Twin Flipper –

Profile Size - 10mm x4mm	
Type	Fire & Smoke
Fire Rating	30Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 15mm x4mm	
Type	Fire & Smoke
Fire Rating	30/60 Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 20mm x4mm	
Type	Fire & Smoke
Fire Rating	60Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Profile Size - 25mm x4mm	
Type	Fire & Smoke
Fire Rating	90Minutes
Lengths	1.05m, 2.1m & 3m
Colours	White/ Brown/ Black/ Grey/Cream/ Red

Timber Frames/ Glazing Beads

Behaviour of timber in fire

Timber chars and possibly flames under fire conditions at a rate and to an extent of deterioration which is dependent on a number of factors:

- The intensity of exposure to radiant heat flux or flame
- The time of continuous exposure
- The density, grain structure and moisture content of the timber

As a rule, for fire safety designers, non-piloted ignition (“spontaneous” or “auto ignition”) does not generally occur unless radiant heat intensities reach the range 25kW/m² to 33kW/m². Under piloted (i.e. naked flame) ignition, flaming can occur at lower intensities of 12kW/m² to 13kW/m².

As timber shows limited expansion in a fire, timber frames and doors generally do not result in significant mechanical stresses in neighbouring constructions.

Both 30 and 60 minute timber systems need to be carefully designed because of this reduction. The type/ species of timber, section thicknesses, fixings, and bead shapes all must be specified in detail. When 60 minute timber frames and doors are required, additional detailing will need to be implemented because of the increased fire exposure time.

Timber density

The type of timber and its density is a key attribute which determines the rate at which timber chars and deteriorates under fire conditions. The grain density and straightness of the grain also exert an effect in terms of the degree to which twisting may occur in the event of fire. Timber is a naturally occurring material and a certain amount of natural variation in properties, especially density, can occur.

The following information is in relation to the charring rates of timber:

- Hardwood timbers used in fire-resistant frames, generally have densities more than 630 kg/m³, with typical char rates in the order of 0.5mm per minute e.g. Sapele, Iroko or Dark Red Meranti – note exceptions below
- Softwood timbers used in fire-resistant frames generally have densities more than 480 kg/m³, with typical char rates of around 0.7mm per minute e.g. European Redwood.

However, there are some exceptions:

- Certain temperate-zone hardwoods e.g. Ash, demonstrate burning characteristics closer to those found for softwood timbers. These types of hardwood must therefore be designed with thicker frames and beads to take into account the increased charring rate. Fire test evidence or third party assessments should be referred to prior to specifying timber species, to ensure performance.

Frames

Timber Frames

Timber frames for doors without transomed overpanels, to the specifications given below, may be used across the complete range of approved sizes and configurations.

Material	Density	Minimum Face Width		Minimum Frame Depth	Minimum Stop Depth
		Single Acting	Double Acting		
Softwood or hardwood	450kg/m ³ <i>Note 13</i>	25mm, excluding stop <i>Note 15</i>	30mm <i>Note 16</i>	70mm	12mm <i>Note 17</i>
MDF	700kg/m ³ <i>Note 14</i>	25mm, excluding stop <i>Note 15</i>	30mm <i>Note 16</i>	70mm	12mm <i>Note 17</i>
Streframe E	510kg/m ³ <i>Note 18</i>	32mm, excluding stop <i>Note 15</i>	32mm <i>Note 16</i>	70mm	12mm <i>Note 17</i>

Timber must have a minimum measured density at 12% moisture content. The timber must be straight grained and of appropriate quality in accordance with BS EN 942: 2007. The moisture content shall be $11 \pm 2\%$ for UK market, (or to suit internal joinery moisture content specification of export countries).

MDF to have a minimum measured density at 12% moisture content.

These dimensions assume that the rear of the frame is protected by the adjacent wall, (and firestopping), and that the frame does not project out from the wall.

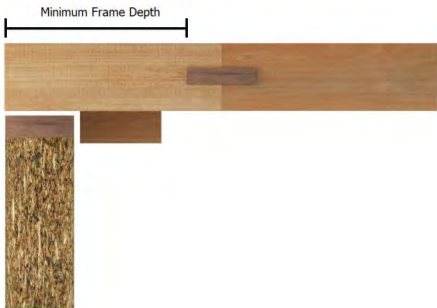
Frames for double acting doors do not require a stop but must have the stated minimum frame thickness at the scalloped edge which is to suit the radius of the pivot stile of the door and to facilitate the fitment of the top pivot.

The doorstop can comprise the same material as the door frame or for planted stops can be one of the other approved materials in the table above (i.e. softwood, hardwood, MDF or finger jointed redwood meeting the minimum specification in the table above). The stop may be either planted and pinned using 40mm steel pins, 40mm steel screws (fixings at 200mm centres) or glued in position or integral with the main door frame, providing the minimum frame thickness remains as stated.

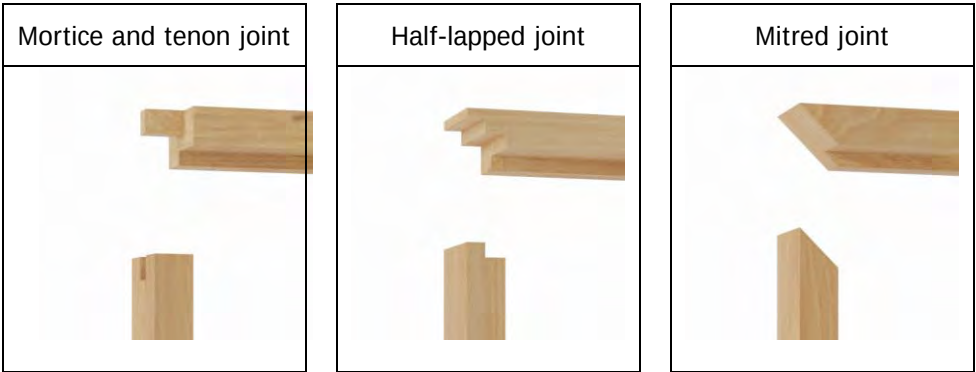
The finger jointed engineered redwood must have a minimum measured density at 12% moisture content. The timber must be straight grained and of appropriate quality in accordance with BS EN 942: 2007. The moisture content shall be $11 \pm 2\%$ for UK market, (or to suit internal joinery moisture content specification of export countries). The finger joints must be glued using PVAc adhesive of the appropriate grade for the application.

The overall frame depth may be increased by the use of extension linings, but the joint between the main frame and the extension lining must not intrude in the plane of the door thickness. The extension linings do not have to be the same material as the main door frame but must be one of the approved materials as listed in the table above.

No joints permitted within the minimum frame depth section outlined within this Report



Head/jamb joint : Mortice and tenon, or half-lapped joint, head twice screwed to each jamb or mitred joint which is glued with a non-thermally softening adhesive and the head twice screwed to each jamb.

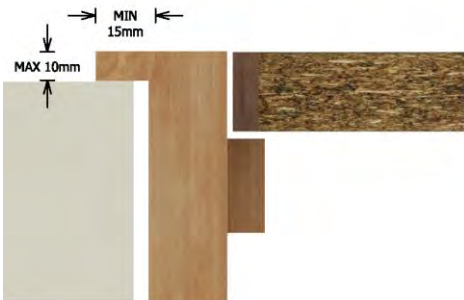


Architraves : **Loose Architraves**

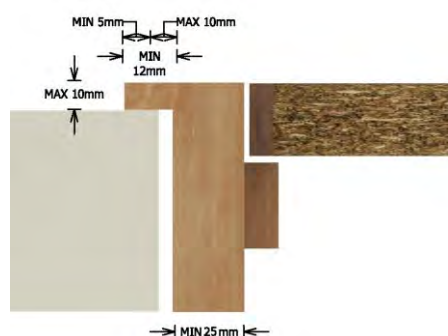
Where the face of the frame, and the door leaf, are flush with the face of the wall, loose architraves are optional, and have no fire performance requirements, and so can be freely specified, subject to adequate fire stopping.

Integral Architraves

Option 1 (all approved frame thicknesses) - Where an integral architrave is used, the face of the door may project beyond the face of the wall, providing the thickness of the architrave is no greater than 10mm and it projects at least 15mm beyond the rear face of the door frame. (This 15mm projection shall **NOT** be formed by machining into the minimum width of frame section, as defined in the table above, i.e. the frame width shall be increased accordingly). This assumes that the face of the door leaf is flush with the face of the architrave. Wall/frame gaps must be controlled to a maximum 10mm with the integral architrave overlapping the supporting wall by a minimum of 5mm.



Option 2 (minimum 32mm thick frame section) – Where an integral architrave is used, the face of the door may project beyond the face of the wall, providing the thickness of the architrave is no greater than 10mm and it projects at least 12mm beyond the rear face of the door frame. (This 12mm projection shall **NOT** be formed by machining into the minimum width of frame section, as defined in the table above, i.e. the frame width shall be increased accordingly). This assumes that the face of the door leaf is flush with the face of the architrave. Wall/frame gaps must be controlled to a maximum 10mm with the integral architrave overlapping the supporting wall by a minimum of 5mm.

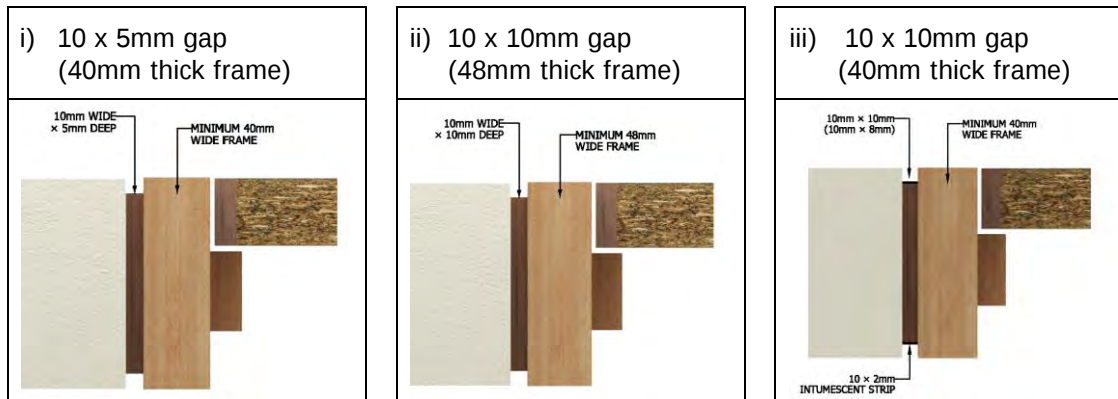


Shadow gap details may be included at junction between the supporting construction and the door frame, using one of the following methods;

- a) The shadow gap may be created by forming a maximum 10mm wide "rebate" in the plasterboard/plaster at the edge of the supporting construction, around the door opening, providing the detail does not detract from the established fire resistance performance of the supporting construction. The exact details will depend upon the construction of the wall/partition;
- b) The shadow gap may be formed by including a maximum 10mm wide timber packer between the wall and the frame, whereby the depth of the packer is less than the depth of the wall/frame; the maximum 'step' formed may be no more than 10mm deep at either face of the door frame. The timber packer can be any of the approved frame materials given in the table above, unless there is a specific reason for specifying hardwood door frames as required by this application document. (e.g. full height multi point locks). If hardwood is required for the main door frame the packer must of the same or greater density and quality as the main frame section.
- c) The shadow gap may be created by increasing the face width of the frame section by a maximum of 10mm, relative to the minimum width defined in the Table above and forming a rebate in the rear edge of the frame.

The above options are approved, subject to the following restrictions:

- i) Maximum 10mm wide x 5mm deep shadow gaps can be included, without additional protection, subject to the "main frame section" being at least 40mm wide.
- ii) Maximum 10mm wide x 10mm deep shadow gaps can be included, without additional protection, subject to the "main frame section" being at least 48mm wide.
- iii) Maximum 10mm wide x 10mm deep shadow gaps can be included where the "main frame section" is less than 48mm, (but at least 40mm), providing a 10 x 2mm intumescent strip is securely fitted into the bottom of the shadow gap.



- iv) The term "main frame section", in points i), ii) and iii) above, refers to the basic rectangular frame section, excluding the shadow gap, and excluding any door stops and/or integral architraves.
- v) If a frame includes an integral architrave AND a shadow gap is required, the integral architrave must meet the specification given above, and the shadow gap must be created using the method described in point a) above with intumescent protection as detailed in point iii) above.

Gaps between the door frame and structural opening including those around timber packers

Why we use Tulipwood:

Fire resistance:

Tulip wood has a high level of fire resistance, making it a suitable material for fire door sets. It has a low rate of heat transfer, which means it can withstand high temperatures for a longer period without catching fire or losing its structural integrity.

Durability:

Tulip wood is known for its strength and durability. It has a tight grain structure and is less prone to warping and splitting, making it an ideal choice for fire door sets that need to withstand regular use and potential exposure to fire.

Aesthetics:

Tulip wood has a beautiful appearance, with a pale yellow to light brown colour and a smooth, even texture. It can be easily painted or stained to match the surrounding décor, offering a visually appealing option that complements the overall design of a building.

Availability:

Tulip wood is widely available, making it a convenient choice for fire door sets. It can be sourced sustainably, as it is typically harvested from responsibly managed forests.

Cost-effectiveness:

Compared to some other fire-resistant door materials, tulip wood can be a more cost-effective option. It provides a good balance between quality, durability, and price, making it an ideal choice for fire door sets without compromising on performance.

The density of tulipwood (*Liriodendron tulipifera*) can range from 32 to 39 pounds per cubic foot (513 to 625 kilograms per cubic meter).

Bead Profiles and Installation

The approved bead sizes and profiles, and relevant fixing details and any limitations upon options of interchangeability with glass types, glazing systems and bead profiles.

- B30/1 14mm deep, 15° chamfered top, with bolection moulding not less than 4mm deep. (With glazing systems S30/19 and S30/20 a 2mm splay is required at the base of the bead at the leaf/glass interface).
- B30/2 14mm deep, 15° chamfered top, flush with leaf face, with or without, maximum, 4 x 4mm quirk. (With glazing systems S30/19 and S30/20 a 2mm splay is required at the base of the bead at the leaf/glass interface).
- B30/3 14mm deep, flat top, flush with leaf face, with or without, maximum, 4 x 4mm quirk. (With glazing systems S30/19 and S30/20 a 2mm splay is required at the base of the bead at the leaf/glass interface).
- B30/4 14mm deep, flat top, with bolection moulding not less than 4mm deep. (With glazing systems S30/19 and S30/20 a 2mm splay is required at the base of the bead at the leaf/glass interface).
- B30/5 Bead as per Lorient recommendations. Size to suit channel and glass thickness. Used in conjunction with glazing system S30/13.
- B30/6 22mm deep, 18°-22° chamfered top, including a 5mm x 5mm bolection return. Bead height to accommodate expansion allowance and edge cover as required for modified toughened glass type (expansion allowance and required edge cover must be confirmed by glass manufacturer)

Glazing beads must be formed from timber with a minimum measured density of 640kg/m³ at 12% moisture content. The timber must be straight grained and of appropriate quality in accordance with BS EN 942: 2007. The moisture content shall be 11 ± 2% for UK market, (or to suit internal joinery moisture content specification of export countries).

Glazing beads B30/1 and B30/2 may be clad with 2mm thick PVC, subject to the utilisation of glazing systems S30/2–S30/8 and S30/11, and associated glasses.

Assessed Aperture Sizes

Apertures are created by cutting directly into the door slab, with beads fitted directly to the Strebord® 44, Strebord® Superpan or Strebord® 54 door core. Alternatively, where a quirk bead (bead type B30/2 or B30/3) is employed, a 10mm thick hardwood lipping may be applied to the aperture perimeter, using the specification for timber lippings defined.

Based upon the size of apertures tested, it is the opinion of IFC that the following limitations apply to glazed apertures in the door leaves considered herein. Multiple apertures (max 10no.) are permitted providing they comply with the limitations given below;

Maximum total area of apertures	-	1.5m ² <i>Notes 28 & 29</i>
Maximum vertical length of aperture	-	2085mm <i>Note 29</i>
Maximum horizontal length of aperture	-	825mm <i>Note 29</i>
Minimum distance from leaf edge (top)	-	90mm
Minimum distance from leaf edge (sides)	-	90mm
Minimum distance between apertures	-	150mm <i>Note 29</i>
Minimum distance from bottom of leaf	-	150mm

Circular Glazing

The leaves are approved for the incorporation of circular glazing up to aperture dimensions of 500mm diameter, subject to the parameters for margins and total area of glazing per leaf, described above. The method of forming the curved beads must remain as tested.

Bead profiles with a bolection moulding are approved (bead types B30/1 and B30/4) with an approved glazing system which can be suitably modified, and associated glasses.

Apertures with some straight and some curved edges (such as full semi-circles or rectangular openings with semi-circular top and bottom ends) are also approved, subject to incorporation of the glazing system, bead type and fixing details as outlined above for circular glazing. Parameters for aperture margins, total area per leaf, and maximum dimensions are described above.

Ladder Glazing

To create the effect of narrow glazing bars separating multiple apertures within a door leaf, it is permitted to include a single glazed aperture, with mock glazing bars applied to either face of a single pane of glass. In all cases, the sizes and margins of the aperture(s) must be in accordance with the above.

This detail has been proven in test, using 10 x 2mm Therm-A-Strip seals to prevent ignition of the glazing beads on the unexposed face when fitted to a non-insulating glass.

Improved Security Bead

A combined bead and aperture lining can be used to deny access to fixings from one side of the door leaf to improve security.

All glazing details are to meet the specification given above unless otherwise stated below.

The aperture in the door must be lined using minimum 26mm thickness combined bead and lining in hardwood of minimum 640kg/m³ density.

The combined bead and lining must be bonded to the aperture using the adhesive types approved and reinforced using No6-8 50mm long screw fixings located centrally within the thickness of the door leaf at 200mm centres.

The beads must be retained in position with 50mm long steel pins or 50mm long No 6-8 screws, inserted at 35-40° to the vertical plane of the door leaf. Fixings must be at 150mm maximum centres and no more than 50mm from each corner. The bead profile must be appropriate for the glazing system selected.

Cattles Specialist Woodwork Ltd – Density Figures

Unit 7, Broughton Grounds Lane, Broughton, Newport Pagnell, MK16 0HZ

EVO Glazing Beads:

Wood Species	KG/M3	Fire Resistance
AW Ash	630kg/m3	FD30/FD60
Beech Steamed	720kg/m3	FD30
Beech White	720kg/m3	FD30
AM Cherry	580kg/m3	FD30/FD60
Koto	650kg/m3	FD30/FD60
Maple	740kg/m3	FD30/FD60
Oak AW	770kg/m3	FD30/FD60
Oak Euro	720kg/m3	FD30/FD60
Oak AM Red	790kg/m3	FD30/FD60
Sapele	640kg/m3	FD30/FD60
Tulipwood	510kg/m3	FD30/FD60
Utile	660kg/m3	FD30/FD60
Walnut AB	660kg/m3	FD30/FD60

Declaration of Data and Specification resourcing:

Evolution declare that the data contained within this document is a collation of information and certification supplied by the manufacturers that are used within Evolution screen systems.

Evolution pride ourselves on using highly accredited suppliers backed up by sufficient data and testing provided by the likes of The Certifier Warrington Fire and British Standard EN13501-1 (Fire Classification of Construction Products and Building Elements).

All components of the Evolution fire doors are constructed and fitted in line with the requirements of the appropriate product specifications, installation methods and guidelines to ensure that all products fulfil their displayed Fire Resisting status.

If you require any further information regarding the Evolution fire doors don't hesitate to contact a member of our team. (See below for details)

Yours Sincerely,



Jonathan Rose – Managing Director

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