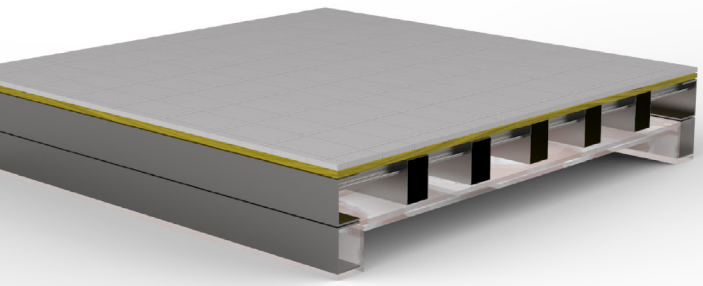
MODULAR CONSTRUCTION



Making Light Weight Fire Rated Flooring A Reality

2-Way Fire Protection

ACOUSTIC RATED

LOAD BEARING

2 WAY FIRE PROTECTION

NCC 2022 READY

TRAFALGAR FIRE

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FyreFLOOR

Lightweight Fire Rated Floor Solutions

FyreFLOOR
Fire Rated Floor Solutions

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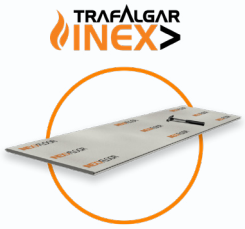

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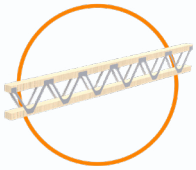
Framing



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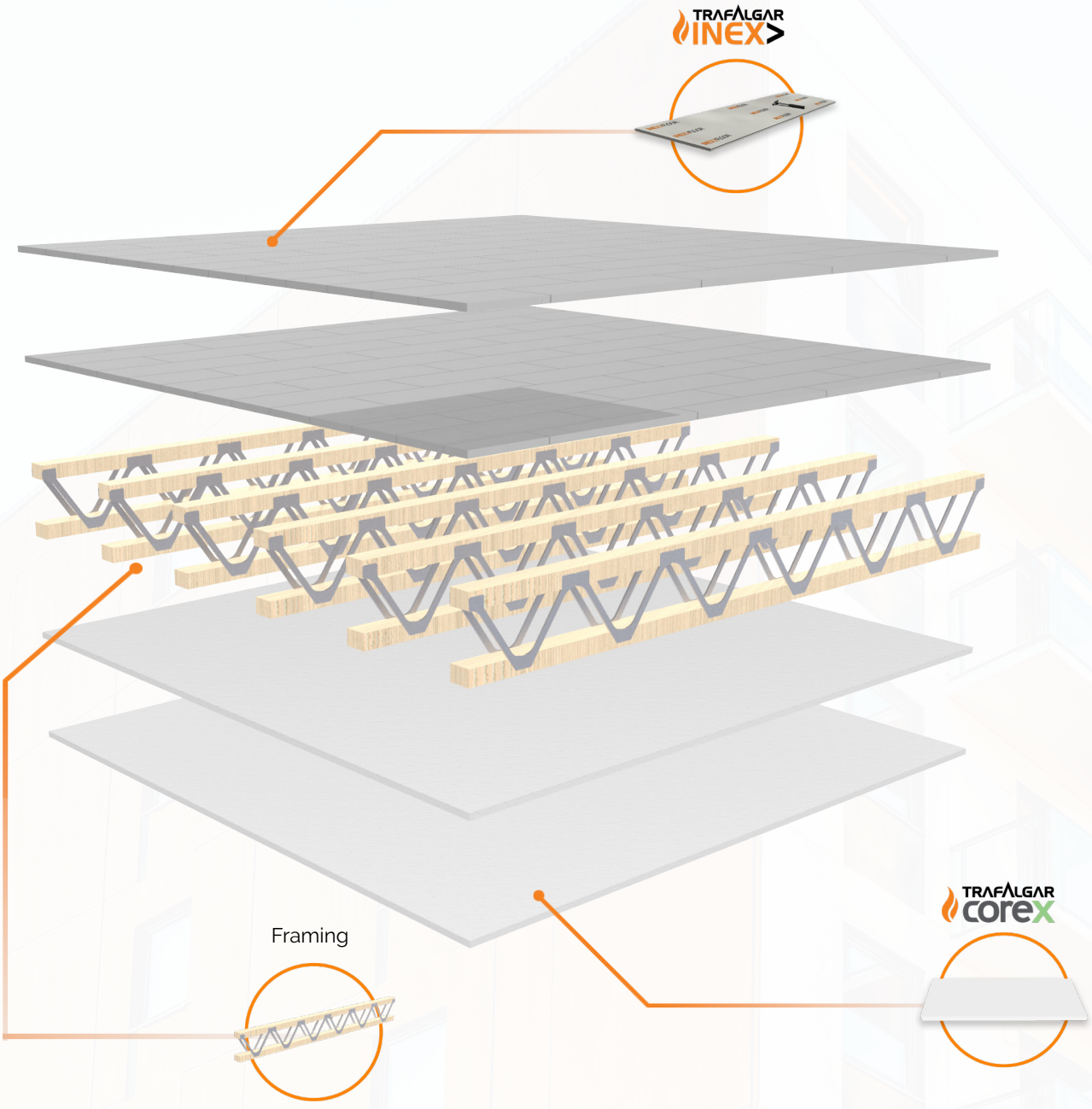
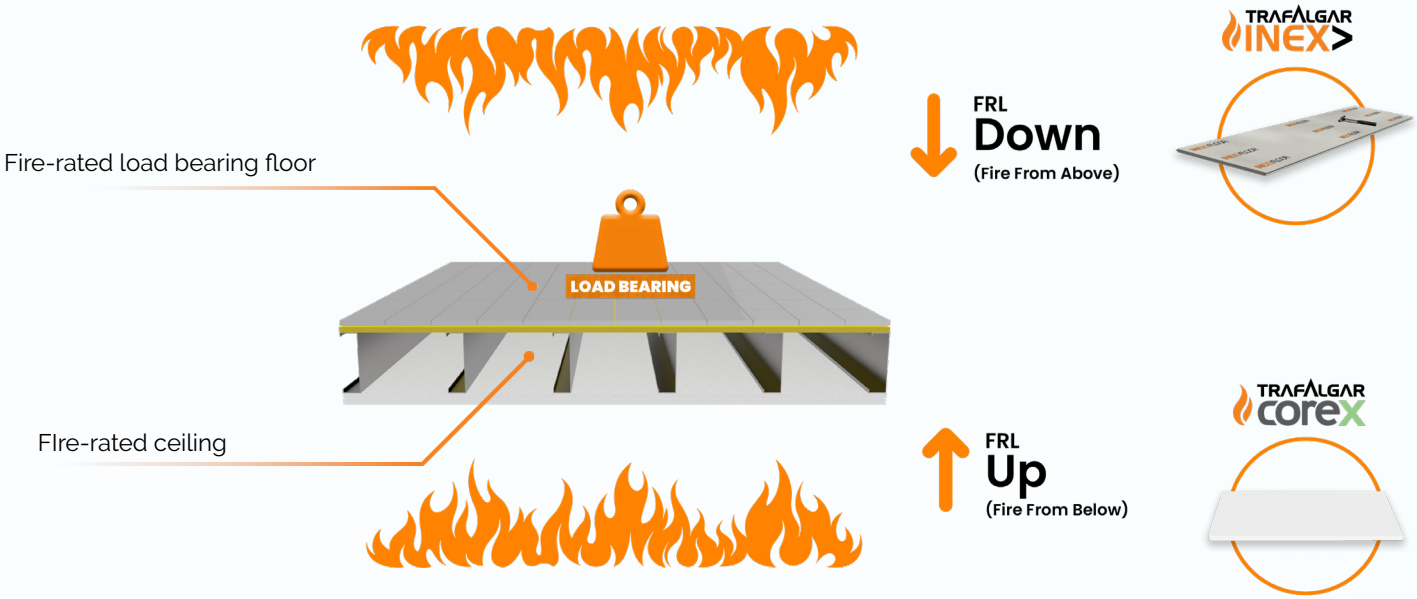




The FyreFLOOR range is a combination of Inex boards and Trafalgar Corex ceiling systems to provide a flexble, lightweight fire and acoustic rated floor for modular and other buildings.

Inex is a high strength lightweight internal or external flooring sheet with tongue and grooved (T&G) edges for a neat secure surface that can be polished to provide a concrete floor like appearance.

Trafalgar Corex Boards are an impact resistant gypsum based fireboard.

KEY FEATURES

- 2-Way FRL Fire Protection
- Lightweight Construction
- High Strength
- Durable
- Suitable for Class 2, 3 or 4 Part Buildings Typa A Construction
- Various Configurations

APPLICATIONS

- Modular Construction
- Lightweight Fire Rated Floor
- Raised Floor Systems
- Load Bearing
- Impact Sound Insulation

TRADES

CONTENTS

WHAT IS FYREFLOOR?

A Trafalgar FyreFLOOR system is a lightwieght horzi-ontal fire separating element (floor) intended for use to provide the fire separating function as a alternative to traditional concrete floor slabs.

The FyreFLOOR systems include a finished 'fire rated floor' above, with a fire rated ceiling underneath. The approved systems can be constructed using vari-ous configurations with timber and/or steel framing , and can provide an FRL from both below and above where required as well as providing good acoustic performance.

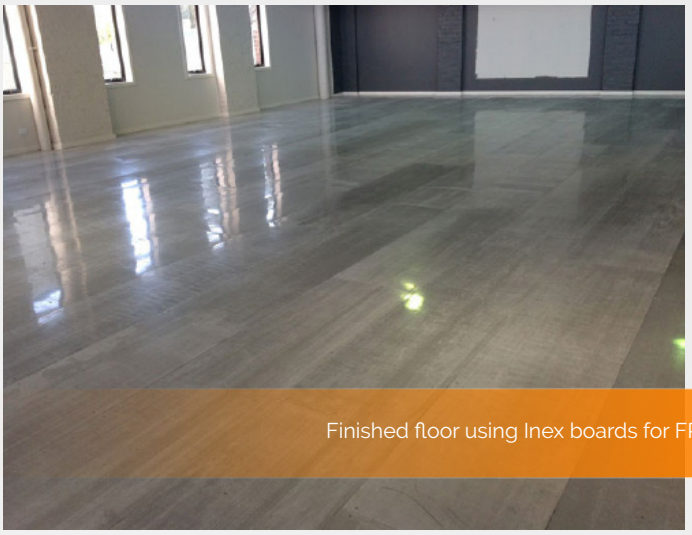
Whether your selection of construction materials are determined by; Time & Cost, Performance, Quality or Space Saving – **FyreFLOOR delivers !**

The floor system is constructed with Inex: a light-weight yet incredibly strong multi-purpose flooring material for all forms of lightweight construction.

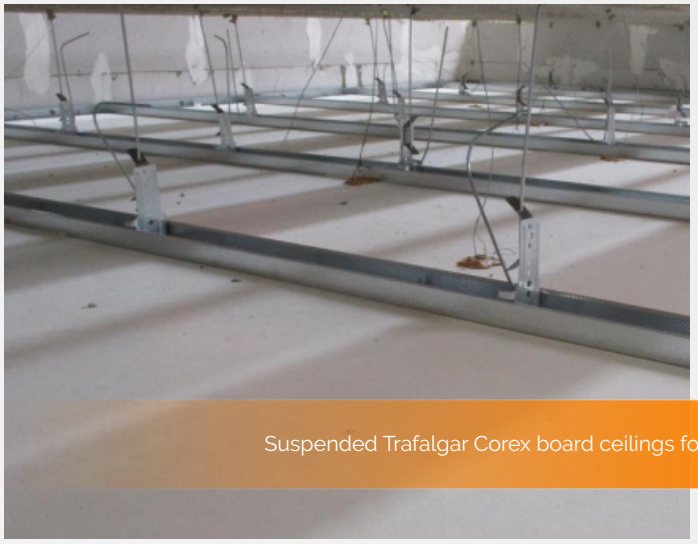
It begins as a cost effective substrate flooring for all applications such as bathrooms, living areas or ex-ternal deck; but can also be used as a finished floor itself.

No speciality tools are required to fix Inex, which can be cut like any other fibre cement sheet and does not need to be predrilled before fixing. Yet at only 19mm thick it outperforms any other comparable product for strength.

FYREFLOOR = FLOOR BOARDS + FRAMING + CEILING LININGS



Finished floor using Inex boards for FRL down



Suspended Trafalgar Corex board ceilings for FRL up

The ceiling can be constructed using Trafalgar's new range of Corex board ceilings or traditional pink fire rated plasterboard ceilings that are tested to AS1530.4-2014. There are numerous FyreFLOOR Floor configurations on either timber or steel joists. For Fire Resistance Levels (FRLs) for fire from both below and above and Acoustic Insulation Per-formances please refer to page 10 onwards.

BENEFITS OF FYREFLOOR

Inex

- Can be cut and worked just like comparable fibre cement sheets, but offers improved bending strength characteristics and finish quality.
- Is non-combustible and can be used in conjunction with floor systems to achieve FRL 90/90/90 in the down direction and up to BAL-FZ bushfire compliance. Refer to our Inex Floor Systems brochure.
- Is an advanced high strength, low carbon fibre reinforced Engineered Cementitious Composite (ECC) product, containing 60% of post industrial recycled materials. It is toxin free and is 100% recyclable.
- Is a high strength yet light weight product weighting as little as 35.5kg per sheet. Inex 16mm is comparable in strength to other FC sheets at 19mm thickness.
- Is long-term durable and is warranted for 20 years. In the "Soak Dry" test item 6.6 of AS/NZS 2908.2- 2000, Inex performs to a mean MPa of >20; test undertaken in accordance with clause 8.2.5 of AS/NZS 2908.2-2000. This represents a test pass at over 80% of the dry strength retained after 25 soak-dry cycles.
- Provides a polished concrete like surface suitable as a quality finish in itself. Class 2 Concrete finish suitable for clear sealing available on request, see note on below.
- Is asbestos free, resistant to mould and termite attack.

IMPORTANT NOTE: Inex as a 'POLISHED CONCRETE' FINISH :

Whilst Inex is primarily a substrate product designed for use under; tiles, carpet and other floor finishes for which it must be fitted rough side up, it can also be used smooth side up to generate a polished concrete appearance. Market response for this use has become significant, however as Inex is manufactured from a range of recycled raw materials it can vary in surface finish and colour.

To ensure customer satisfaction should a polished concrete floor use be specified or wanted requires that this request be placed directly to prior to purchase. will then ensure that a premium grade Inex that is fit for use as a polished concrete surface is delivered to the customer's Inex point of purchase.

Due to the cementitious nature of InexBOARDS some superficial pin holing may occur The smooth side of Inex is characterised as a CLASS 2 concrete finish.

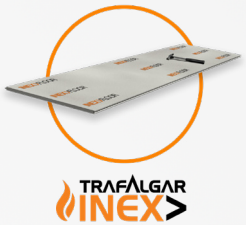
FyreFLOOR

Lightweight Fire Rated Floor Solutions

2 WAY FIRE PROTECTION

ACOUSTIC RATED

FIRE PERFORMANCE - INEX



AS1530.1 NON-COMBUSTIBLE AS1530.2 FLAMMABILITY	AS1530.3 NON-IGNITABILITY	AS/NZS 3837:1998 BCA Spec A2.4 GROUP 1	AS1530.4:2014 FRL from above: 60/60/60 90/90/90
↓	↓	↓	↓
FNC12063 EWFA 312153-00a	FNE12018	EWFA 25902-01a.2 EWFA 25902-01b.2 EWFA 25902-01d.2	FAS200398

PRODUCT SPECIFICATIONS

Property	Dimensions
Thickness (mm)	19
Length (mm)	1800 / 2700
Width (mm)	600
Density (kg/m3)	1295
Average Mass (kg/m2)	26.5

PROPERTIES - INEX

	Test	Result	Standard
Geometrical Tests	**Length/Width/Thickness**	PASS	AS/NZS 2908.2
	Straightness & Squareness	PASS	AS/NZS 2908.2
Strength	**Bending Strength (Mean)**	>22MPa (Dry) / >20MPa (Wet)	AS/NZS 2908.2 – Clause 6.1 – test method 8.2.1
	Classification – Type	A* (Wet)	AS/NZS 2908.2
	Category	5 (Wet)	AS/NZS 2908.2
	Modulus of Elasticity	>10GPa (Dry) / >8 GPa (Wet)	AS/NZS 1774.31.1: 2000
Durability, Moisture Resistance and Corrosion	**Water Permeability**	PASS	AS/NZS 2908.2 – Clause 6.2 – test method 8.2.2
	Frost Resistance	PASS	AS/NZS 2908.2 – test method 8.2.3
	Heat-rain	PASS	AS/NZS 2908.2 – test method B.5
	Soak-dry	PASS	AS/NZS 2908.2 – test method 8.2.5
	Corrosion	Tests undertaken by SGS Australia Pty. Ltd. And demonstrate that Inex does not accelerate corrosion on class 3 or higher metal fasteners & fixings	
Thermal Properties	**Thermal Conductivity**	0.179 W/m.k	AS/NZS 4859.1
	R Value at 16mm Thickness	0.09m2.K/W	AS/NZS 4859.1
	Flammability Index	0	AS1530.2: 1993
	Ignitability Index	0	AS/NZS 1530.3: 1999
	Spread of Flame Index	0	AS/NZS 1530.3: 1999
	Heat Evolved Index	0	AS/NZS 1530.3: 1999
	Smoke Developed Index	1	AS/NZS 1530.3: 1999
	Combustibility	Deemed Non-combustible	AS1530.1: 1994 – Clause 3.4 & AS/NZS 3837: 1998 Building Code of Australia – Specification A2.4

PROPERTIES - INEX (CONTINUED)

	Test	Result	Standard
Misc.	**Asbestos**	PASS - Asbestos Free	AS 4964: 2004
	Fungal Resistance	PASS – No Growth	ASTM C1338-08
	VOC Emission	Very Low (0.053mg/m2/hr)	ASTM D5116

	Test	Profile Side	Smooth Side	Standard
Slip Resistance	**Wet Pendulum**	X [LOW*]	Y [MEDIUM*]	AS/NZS 4586:2004 (Appendix A)
	Dry Floor Friction	Class F	Class F	AS/NZS 4586:2004 (Appendix B)
	Wet/Barefoot Ramp	Class A	N/A	AS/NZS 4586:2004 (Appendix C)
	Oil-Wet Ramp	R11 [HIGH*]	N/A	AS/NZS 4586:2004 (Appendix D)

* CSIRO Classification

SPAN AND LOADING PROPERTIES

This SPAN & LOADING PROPERTIES table sets out the maximum permissible Concentrated Loads (kN) and Uniformly Distributed Loads (kPa) for both Inex16 and Inex 19 over various joist spans. Unless noted otherwise, in all cases a deflection limit of span/200 under Serviceability Limit State loading has not been exceeded.

Inex thickness (mm)	Joist Spacing (mm)					
	300		450		600	
	Live load or concentrated action (kN)	Uniformly distributed load (kPa)	Live load or concentrated action (kN)	Uniformly distributed load (kPa)	Live load or concentrated action (kN)	Uniformly distributed load (kPa)
19	10.0	55.0	4.5	16.5	2.7	7.0

* Not suitable as a substrate for tiled finish as deflection at mid-span may be up to 3.3mm under maximum load

PRINCIPAL CATEGORY THRESHOLDS FOR CONCENTRATED LOADS (KN)

Category	Description	KN Threshold	Inex Application
A	Domestic & Residential Activities	1.8 or lower	Inex 19 @ Max. 600mm* centres
B	Offices for general use	2.7 or lower	Inex 19 @ Max. 600mm centres
C1 & C2	Areas where people congregate	2.7 or lower	
B & C3	Laboratories/workshops & museums	4.5 or lower	Inex 19 @ Max. 450mm centres
E	Warehousing and storage areas	9.0 or lower	Inex 19 @ Max. 300mm centres

* Not suitable as a substrate for tiled finish as deflection at mid-span may be up to 3.3mm under maximum load

Note: The load limits have been stated with a view to the loading requirements of AS/NZS 1170.1 Table 3.1 which outlines various categories of use and load limits for those uses.

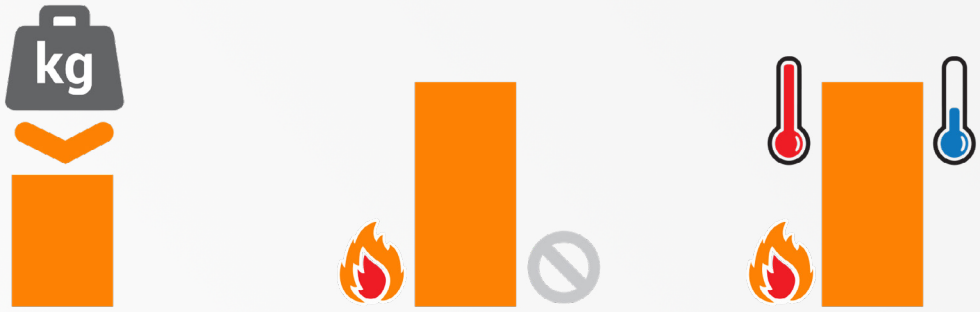
WHAT IS AN FRL?

Fire Rating - How is fire performance measured?

An FRL (fire resistance level) is a handy way of summarising the performance of a building element. It consists of 3 numbers, all given in minutes:

FRL 120/120/120

(example)



Structural Accuracy

The ability of the building element to support the weight of adjacent building elements.

i.e: a brick wall supporting a concrete slab above

Integrity

The ability of an element to prevent the passage of flames and hot gasses.

i.e: a plasterboard wall remaining intact and not allowing holes to form

Insulation

The ability of an element to resist heat transfer from the exposed face to the unexposed face.

i.e: a bundle of cables remaining below a set temperature limit on the unexposed side of the wall penetration system.

Note: Penetrations are not required to have a Structural Adequacy rating and is usually expressed as a dash. For example, a penetration through a 2 hour load bearing wall would be written as -/120/120.

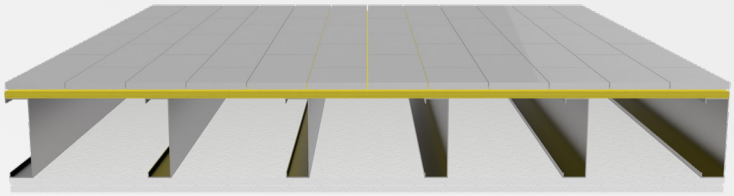
FRl in the up direction (Fire from below)

The FRL ratings are determined by Fire Tests undertaken against AS 1530.4:2014. Section 4 of this standard deals with; FLOORS, ROOFS AND CEILINGS. Clause 4.7 requires that "*The specimen shall be exposed to fire from* ***below***". This is in the UP direction, with the FRL as defined in the above image. The FyreFLOOR systems in this manual utilise existing and new fire rated ceiling constructions where various layers of gypsum based plasterboard (E.G Corex Boards) are clad or suspended from the underside of the floors framing members and are capable of acheiving FRL's up to 120/120/120.

FRl in the down direction (Fire from above)

Trafalgar recognises that leightweight loadbearing floor systems such as are becoming increasingly popular in the modular building industry, are subject to much higher risk of fire attack/spread from above the finished floor that traditional concrete slabs can inherrently withstand. Accordingly, Traflagar have developed a number of FRL DOWN floor systems to assist Builders, Certifiers/Surveyors and Fire Engineers in their selection of suitable materials for lightweight construction projects. Inex systems have been appraised to acheive up to 90/90/90 FRL from above from a NATA acredited testing laboratory.

FRL
Down
(Fire From Above)



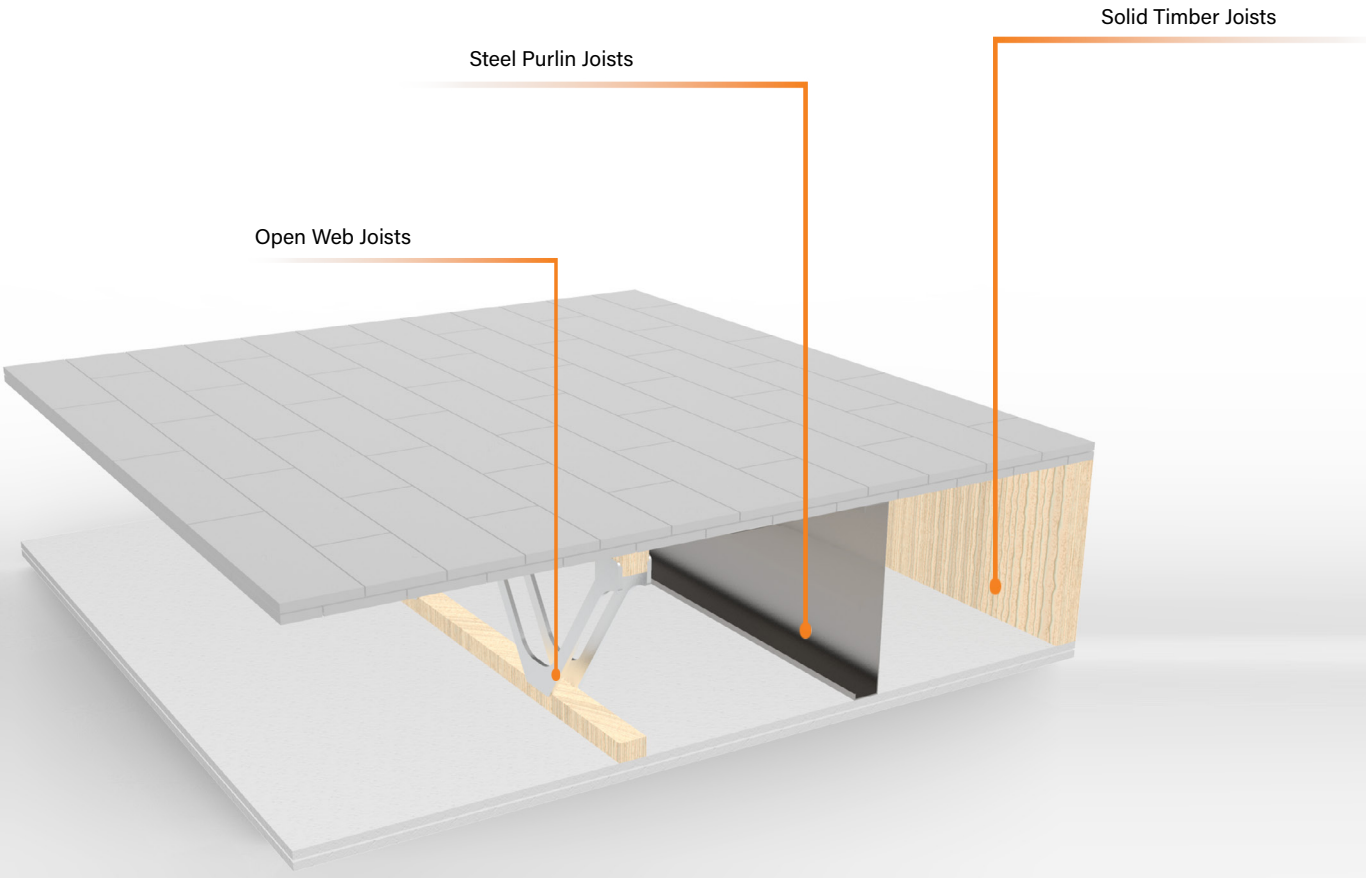
FRL
Up
(Fire From Below)

FRL APPROVAL TABLES

60 Minute Systems

System	Joist Type	Ceiling Fire Rating		Floor Fire Rating	
		FRL Up	Trafalgar Corex Board	FRL Down	Trafalgar Inex Floor
TFF 60 TF	Solid Timber + Fixed Ceiling	60/60/60	2x15mm	60/60/60	1x19mm Plywood/ Particleboard + 1x19mm Inex-FLOOR19
TFF 60 TS	Solid Timber + Suspended Ceiling	60/60/60	2x15mm	60/60/60	1x19mm Plywood/ Particleboard + 1x19mm Inex-FLOOR19
TFF 60 SF	Steel Purlin + Fixed Ceiling	60/60/60	2x15mm	60/60/60	1x19mm Plywood/ Particleboard + 1x19mm Inex-FLOOR19
TFF 60 SS	Steel Purlin + Suspended Ceiling	60/60/60	2x15mm	60/60/60	1x19mm Plywood/ Particleboard + 1x19mm Inex-FLOOR19
TFF 60 PF	Open Web Joist + Fixed Ceiling	60/60/60	2x15mm	60/60/60	1x19mm Plywood/ Particleboard + 1x19mm Inex-FLOOR19
TFF 60 PS	Open Web Joist + Suspended Ceiling	60/60/60	2x15mm	60/60/60	1x19mm Plywood/ Particleboard + 1x19mm Inex-FLOOR19

Multiple Framing Options

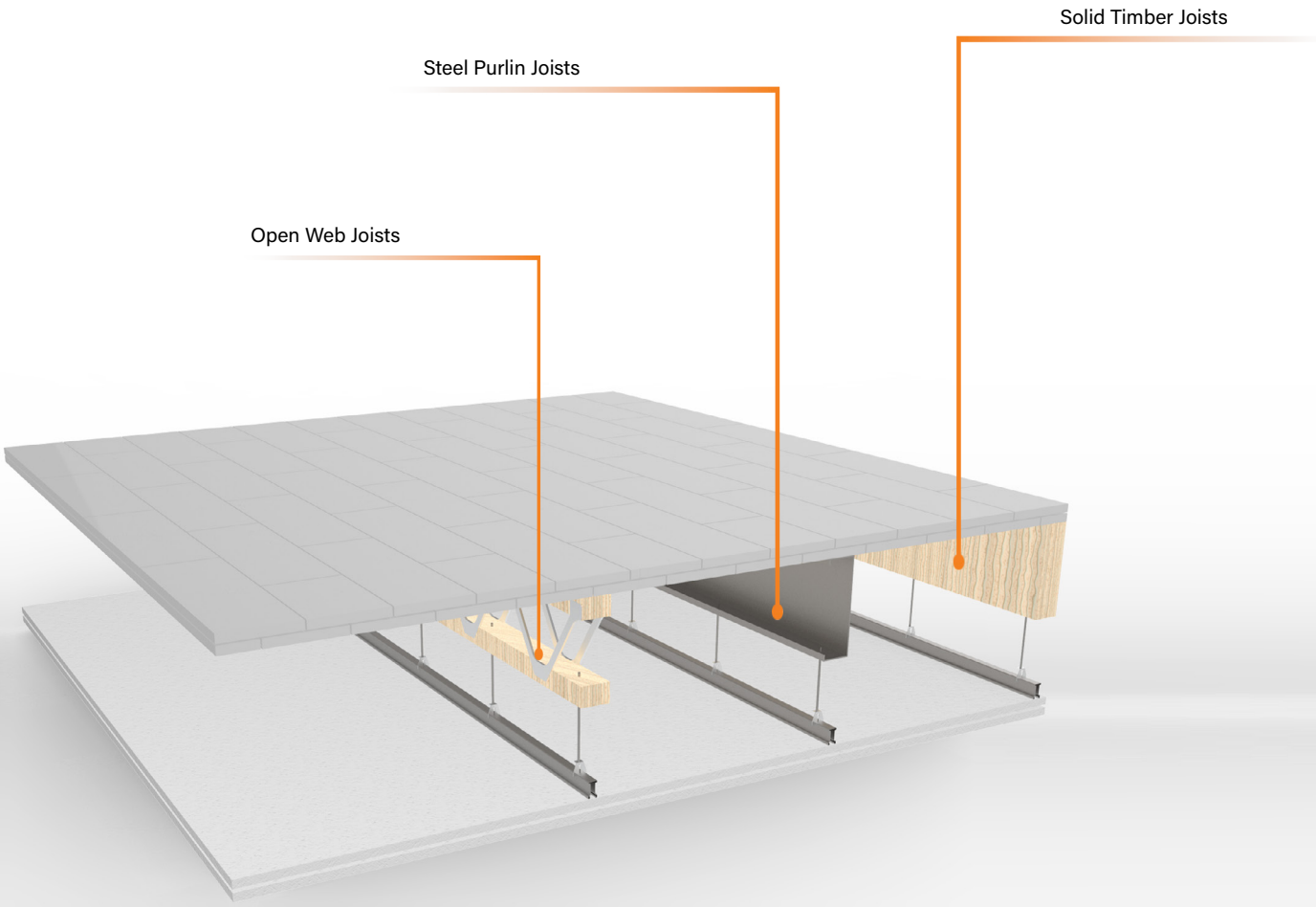


90 Minute Systems

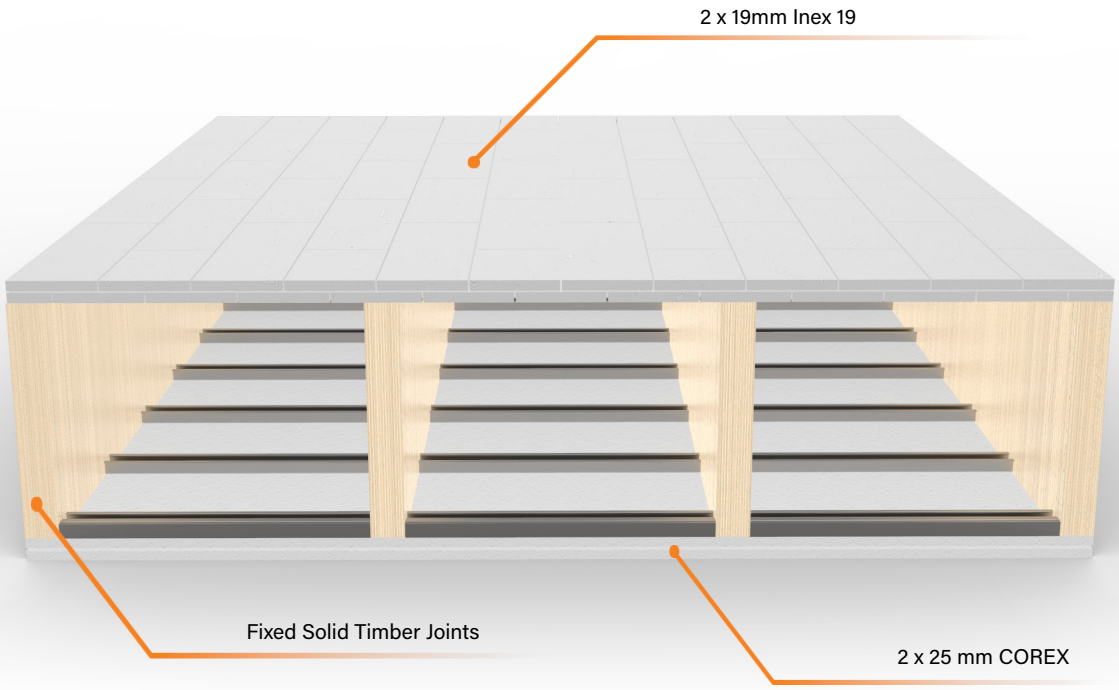
System	Joist Type	Ceiling Fire Rating		Floor Fire Rating	
		FRL Up	Trafalgar Corex Board	FRL Down	Trafalgar Inex Floor
TFF 90 TF	Solid Timber + Fixed Ceiling	120/120/120	2x25mm	90/90/90	2x19mm Inex-FLOOR19
TFF 90 TS	Solid Timber + Suspended Ceiling	120/120/120	2x25mm	90/90/90	2x19mm Inex-FLOOR19
TFF 90 SF	Steel Purlin + Fixed Ceiling	120/120/120	2x25mm	90/90/90	2x19mm Inex-FLOOR19
TFF 90 SS	Steel Purlin + Suspended Ceiling	120/120/120	2x25mm	90/90/90	2x19mm Inex-FLOOR19
TFF 90 PF	Open Web Joist + Fixed Ceiling	120/120/120	2x25mm	90/90/90	2x19mm Inex-FLOOR19
TFF 90 PS	Open Web Joist + Suspended Ceiling	120/120/120	2x25mm	90/90/90	2x19mm Inex-FLOOR19

For 120 minute systems, contact Trafalgar at technical@tgroup.com.au

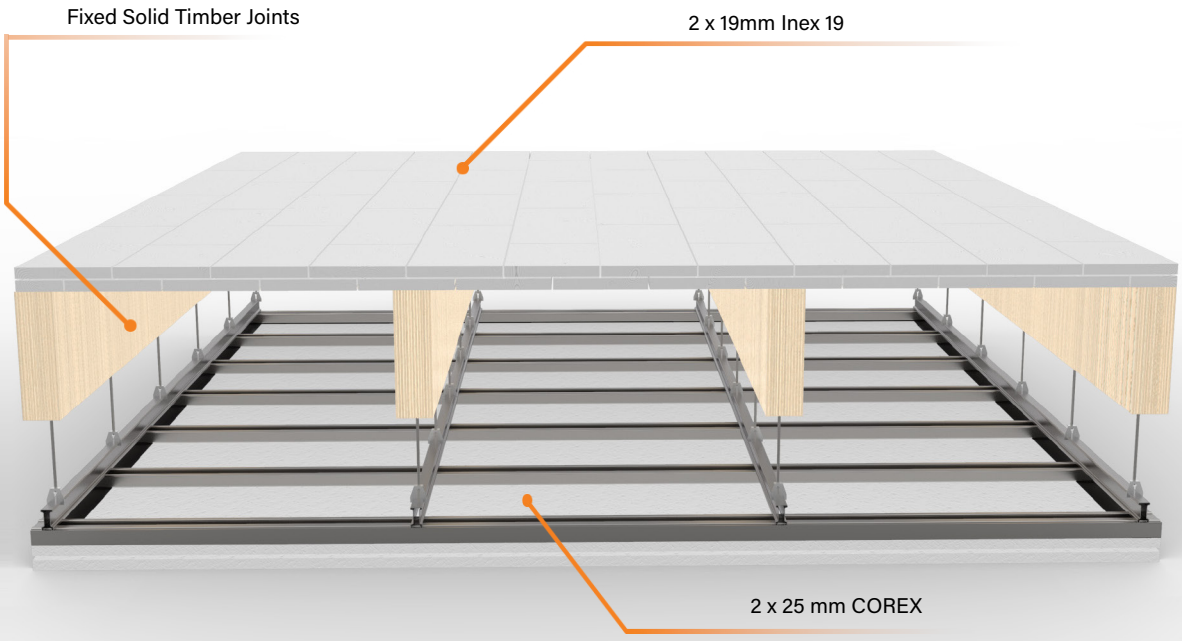
Multiple Framing Options



Example - Solid Frame

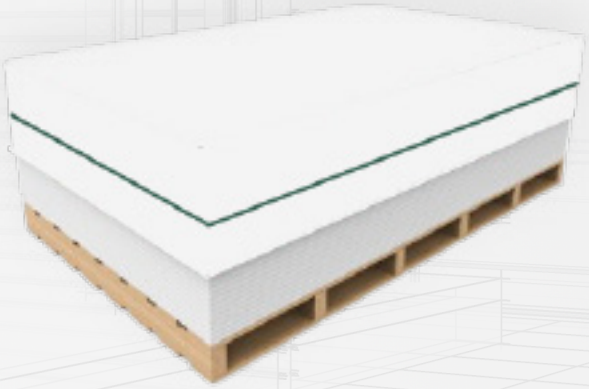


Example - Suspended Ceilings



SYSTEM RANGE

Item Number	Description	Min Order Qty	Pallet Qty
Inex 19	INEX board - 2700L x 600W x 19mm - FRL-Down flooring boards	1	25



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sustainable

Item Number	Description	Min Order Qty	Pallet Qty
COREX-12.5	12.5mm x 2000mm x 1200mm COREX Board	1	40
COREX-15	15mm x 2000mm x 1200mm COREX Board	1	32
COREX-20	20mm x 2000mm x 1200mm COREX Board	1	24
COREX-25	25mm x 2000mm x 1200mm COREX Board	1	18

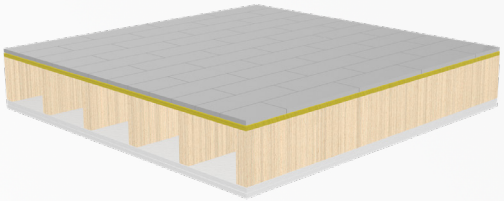
ACOUSTIC PERFORMANCE

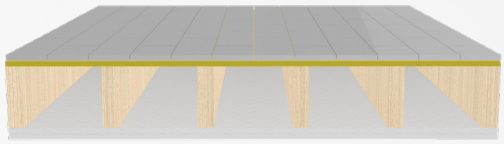
NOTES

- These tables provide predicted sound insulation by 's acoustic consultants - PKA Acoustic Consulting PTY LTD.
- TIMBER + UNDERLAY = minimum 15mm engineered timber floor with minimum 5mm rubber acoustic underlay and following manufacturer's periphery isolation detail.
- CARPET + UNDERLAY = quality carpet with minimum 8mm foam underlay.
- All predictions given for floor joists at 450mm centres.
- Insulation options are: 145mm R3.0 7.5kg/m^3 Knauf 'Earthwool' ceiling batts, or 145mm R2.7 7.0kg/m^3 Bradford Gold ceiling batts, or equivalent

TFF 60 TF – Solid Timber + Fixed Ceiling

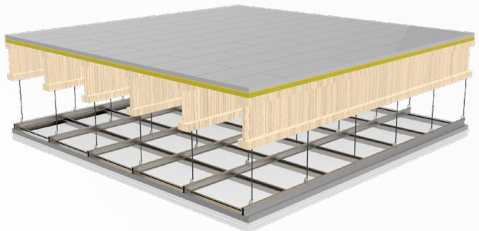
The following systems are applicable where 60 minute FRLs are required for both fire from above as well as below. Where fire from below is covered by 2x layers of 13mm Fire rated Plasterboard OR 2x layers of 15mm Corex and fire from above is covered by 1x layer of 19mm Inex 19 and 1x layer of 19mm Plywood/Particleboard.

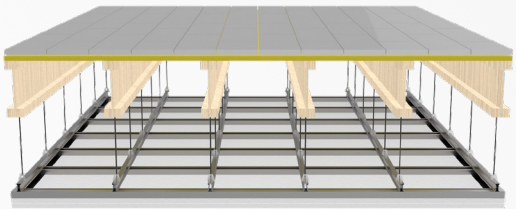




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 60 TF	140	48/40	79/80	73/74	64/65
	190	49/41	79/79	73/73	64/64
	290	49/42	79/78	73/72	64/63

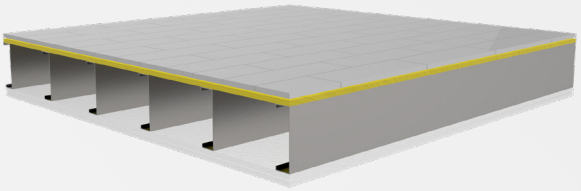
TFF 60 TS – Solid Timber + Suspended Ceiling

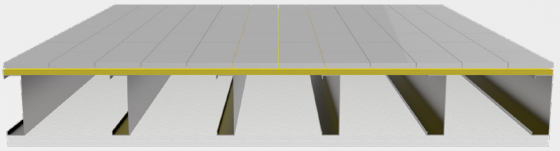




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 60 TS	150	60/52	64/64	56/56	45 or less
	200	60/53	63/62	55/54	
	300	61/55	62/60	54/52	

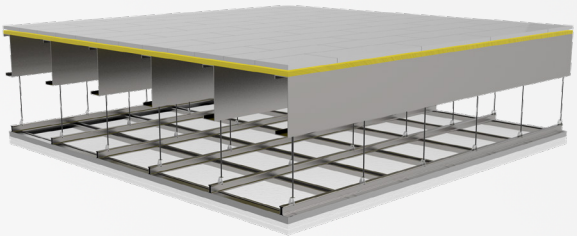
TFF 60 SF – Steel Purlin + Fixed Ceiling

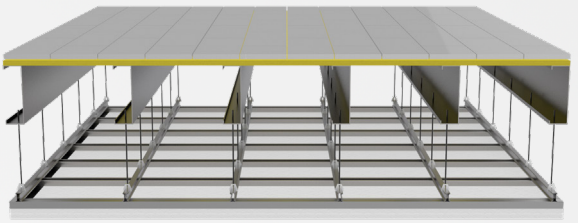




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 60 SF	150	50/42	77/78	71/72	64/65
	200	51/43	77/77	71/71	64/64
	300	51/44	77/76	71/70	64/63

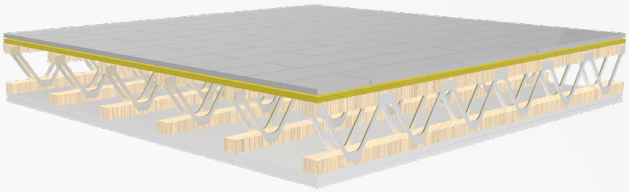
TFF 60 SS – Steel Purlin + Suspended Ceiling

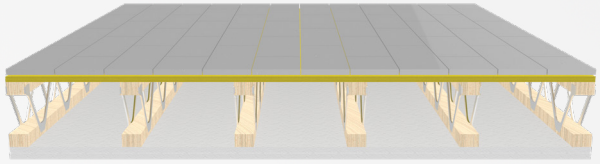




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 60 SS	150	60/52	64/64	56/56	45 or less
	200	60/53	63/62	55/54	
	300	61/55	62/60	54/52	

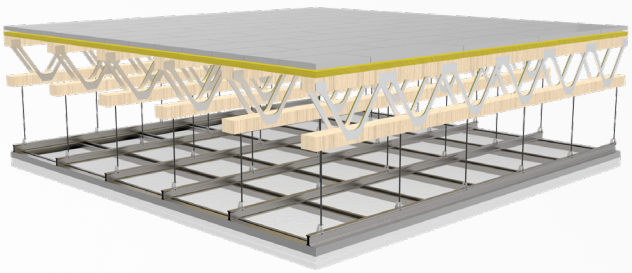
TFF 60 PF – Open Web Joist + Fixed Ceiling

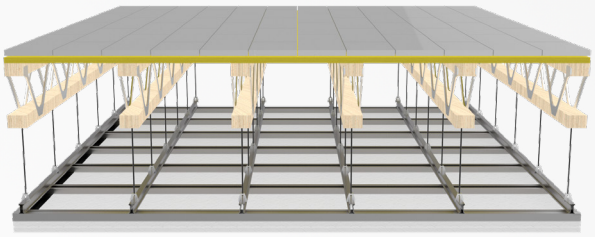




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 60 PF	200	51/43	77/77	71/71	64/64
	300	51/44	77/76	71/70	64/63
	400	52/45	77/76	71/70	64/63

TFF 60 PS – Open Web Joist + Suspended Ceiling

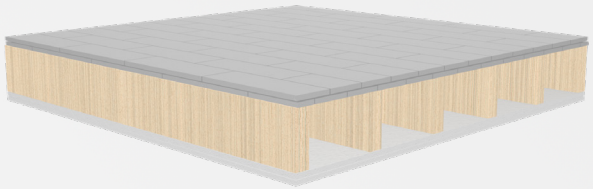


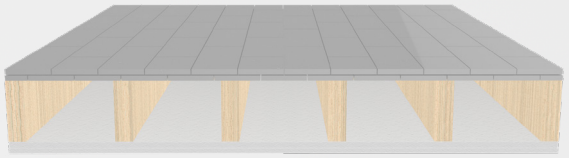


SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 60 PS	200	60/53	63/62	55/54	45 or less
	300	61/55	62/60	54/52	
	400	61/55	61/59	53/51	

TFF 90 TF – Solid Timber + Fixed Ceiling

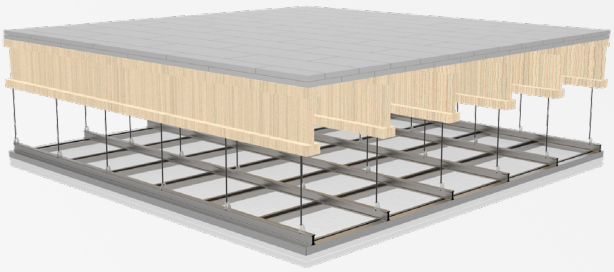
The following systems are applicable where 90 minute FRLs are required for both fire from above as well as below. Where fire from below is covered by 2x layers of 16mm Fire rated Plasterboard and fire from above is covered by 2x layers of 19mm Inex 19.

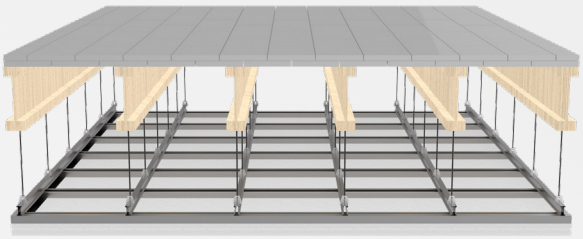




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 90 TF	140	49/41	79/80	73/74	64/65
	190	50/42	79/79	73/73	64/64
	290	50/43	79/78	73/72	64/63

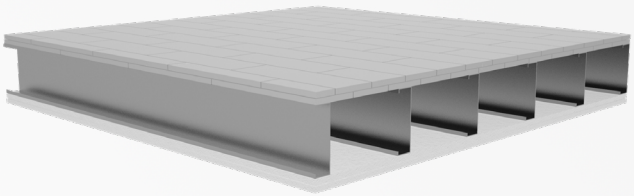
TFF 90 TS – Solid Timber + Suspended Ceiling

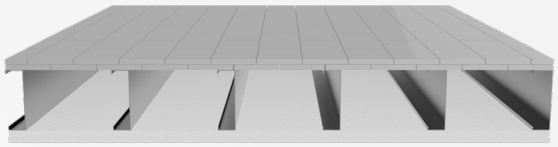




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 90 TS	140	61/53	63/63	55/55	45 or less
	190	61/55	62/61	54/53	
	290	61/57	61/59	53/51	

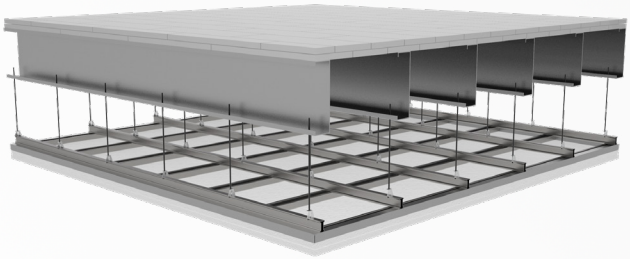
TFF 90 SF – Steel Purlin + Fixed Ceiling

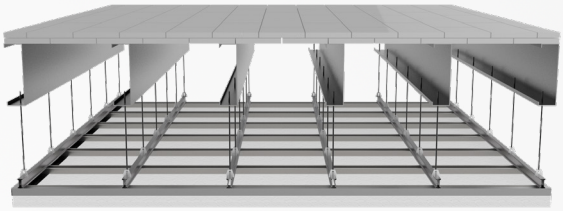




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 90 SF	150	51/43	77/78	71/72	64/65
	200	52/44	77/77	71/71	64/64
	300	52/45	77/76	71/70	64/63

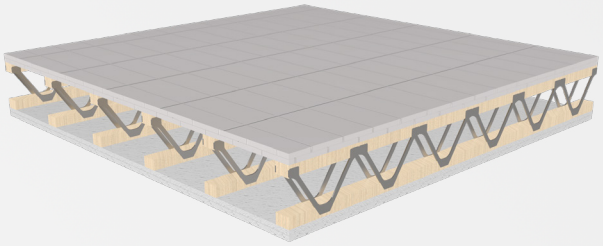
TFF 90 SS – Steel Purlin + Suspended Ceiling

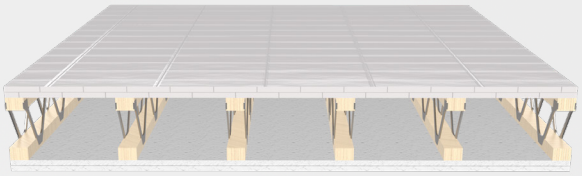




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 90 SS	150	61/53	63/63	55/55	45 or less
	200	61/55	62/61	54/53	
	300	61/57	61/59	53/51	

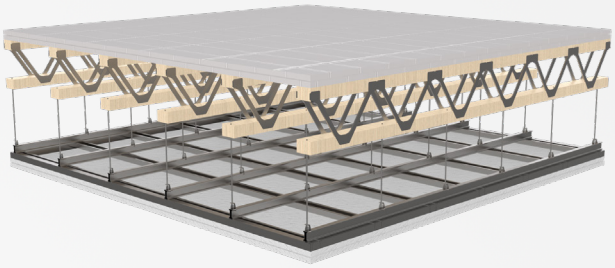
TFF 90 PF – Open Web Joist + Fixed Ceiling

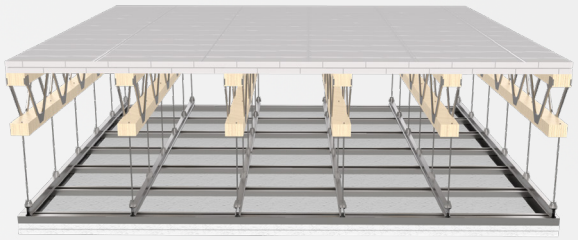




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 90 PF	200	52/44	77/77	71/71	64/64
	300	52/45	77/76	71/70	64/63
	400	53/46	77/76	71/70	64/63

TFF 90 PS – Open Web Joist + Suspended Ceiling

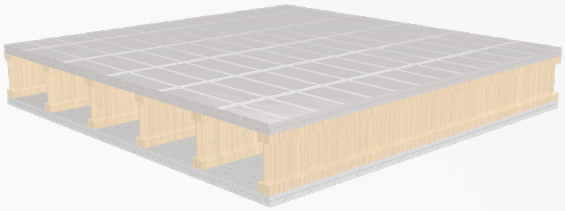


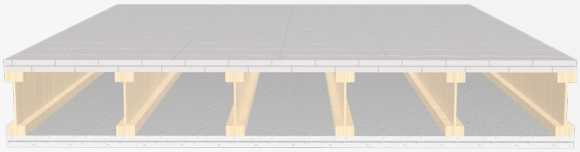


SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 90 PS	200	61/55	62/61	54/53	45 or less
	300	62/57	61/59	53/51	
	400	62/57	61/59	53/51	

TFF 120 TF – Solid Timber + Fixed Ceiling

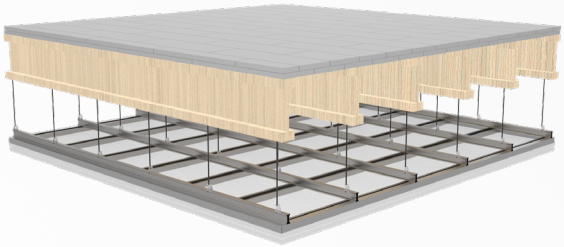
The following systems are applicable where 120 minute FRLs are required for both fire from above as well as below. Where fire from below is covered by 3x layers of 16mm Fire rated Plasterboard OR 2x layers of 25mm Corex and fire from above is covered by 2x layers of 19mm Inex 19 (90/90/90 from above).

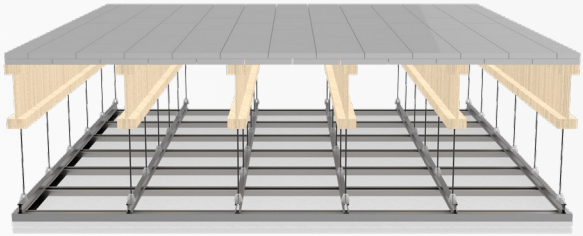




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 120 TF	140	51/43	78/79	72/73	63/64
	190	52/44	78/78	72/72	63/63
	290	52/44	78/77	72/71	63/62

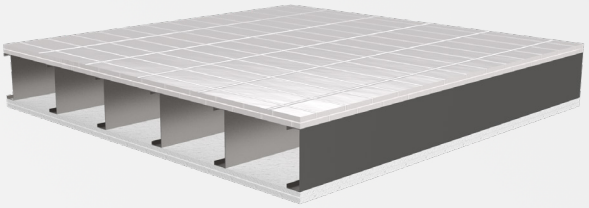
TFF 120 TS – Solid Timber + Suspended Ceiling





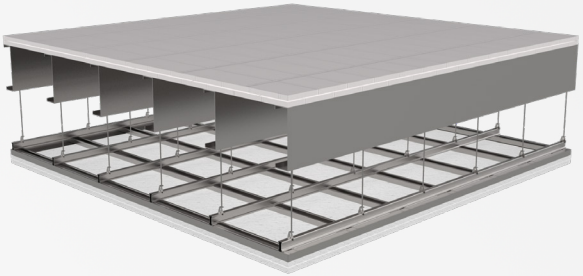
SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 120 TS	140	63/55	61/61	53/53	45 or less
	190	63/57	60/59	52/51	
	290	64/59	59/57	51/79	

TFF 120 SF – Steel Purlin + Fixed Ceiling



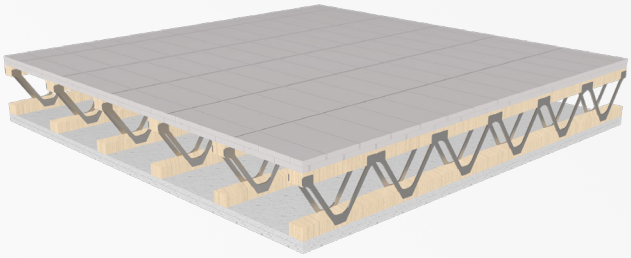
SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 120 SF	150	53/45	76/77	70/71	63/64
	200	54/46	76/76	70/70	63/63
	300	54/47	76/75	70/69	63/62

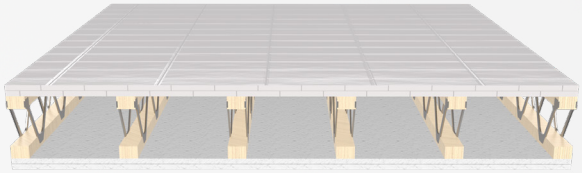
TFF 120 SS – Steel Purlin + Suspended Ceiling



SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 120 SS	150	63/55	61/61	53/53	45 or less
	200	63/57	60/59	52/51	
	300	64/59	59/57	51/49	

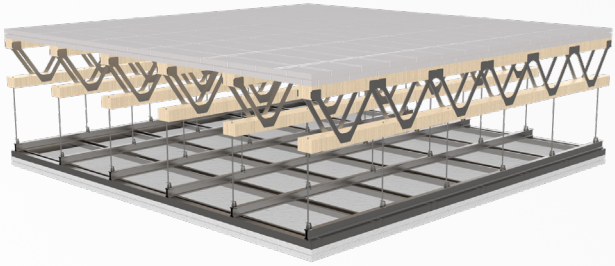
TFF 120 PF – Open Web Joist + Fixed Ceiling

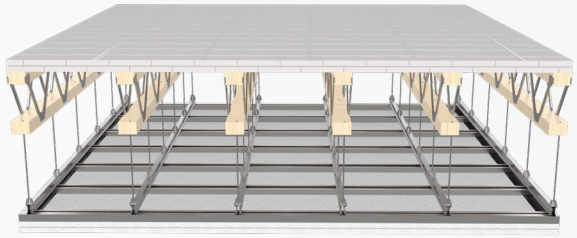




SYSTEM	Joist (mm)	Airborne Sound Insulation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 120 PF	200	54/46	76/77	70/71	63/63
	300	54/47	76/75	70/69	63/62
	400	55/48	76/75	70/69	63/62

TFF 120 PS – Open Web Joist + Suspended Ceiling





SYSTEM	Joist (mm)	Airborne Sound Insu-lation	Impact Sound Insulation		
			Bare Inex	Timber + Underlay	Carpet + Underlay
		Rw / Rw + Ctr	Ln,w / Ln,w+Ci		Ln,w+Ci
TFF 120 PS	200	63/57	60/59	52/51	45 or less
	300	64/59	59/57	51/49	
	400	64/59	58/56	50/48	

INSTALLATION

Equipment

General

Inex can be machined and worked in same way as comparable fibre cement wall sheeting.

Cutting

Inex should be cut using a mechanical dust reducing circular saw with a diamond edge blade, similar to that used to cut softer brick or stone or the ones specifically used to cut fibre cement sheet. See also Health & Safety section below.

Screw Fixing

Inex must be screw fixed only. Use a cordless power drill.

Control Joint

When installing Inex in situation where wall height is more than one storey, horizontal movement control joints are required at each level. Standard V-joints, starter trims or shadowline trims can be used, subject to designer's detailing. Movement control joints are to be provided where wall dimensions exceed 8m in the long sheet direction, at changes of wall direction and at openings such as windows and doorways or where existing structural joints are located.

Backing Rod

Where movement control joints are needed in any Inex application, use a closed cell PE foam backing rod of 10–12mm diameter to control the design depth of InexBOND or equivalent adhesive/sealant used to seal the joint. For more details refer to the InexBOND product data sheet.

Health and Safety

advises that Inex contains fiberglass reinforcing and causes fine dust when cutting or machining. Continuous or excessive inhalation of fine dust containing fiberglass particles can cause irritation and may cause lung scarring (silicosis). This dust could be

Location

Always cut in a well ventilated outdoor location.

Clothing, Masks and Goggles

Always wear protective clothing and properly fitted and approved mask (respirator) and eye protective goggles.

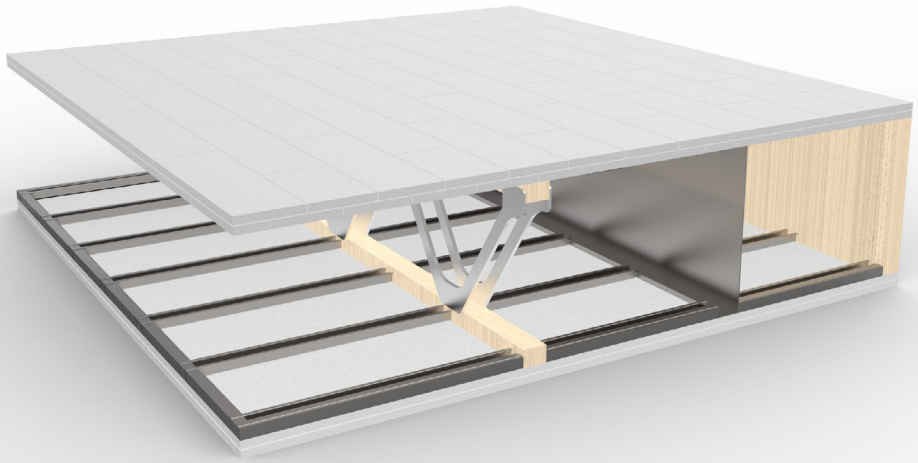
Dust Limitation

Always use a mechanical circular saw equipped with a fitted dust extraction system. When cutting is finished always vacuum up residual dust. Maintain the work area as a dust free environment.

Framing / Assembly / Fixing

Inex can be fixed to either timber on light gauge steel framing at a maximum of 600mm centres. Refer to the Span & Loading Property table on page 6 for optimum joist centres. Inex is ideally suited as a PLATFORM FLOOR SYSTEM providing a working floor for wall frame and roof frame erection during construction with cost and time saving benefits. Alternatively, Inex can be fitted after the wall frames have been erected allowing a 2mm gap between the Inex and the bottom wall plate.

It is recommended that the Inex sheets be installed with the long edge across the joists. When the long edge of the sheets are laid parallel to the joists, trimmers must be added to fully support all edges and joints. The joist framing must continuously support both the long and short sheet edges fully on the joists which includes expansion and control joints. Inex can be fitted to a square (brick-stack bond) pattern or staggered (brick-stretcher bond) pattern, but must be staggered for tiled, carpeted or vinyl finishes.

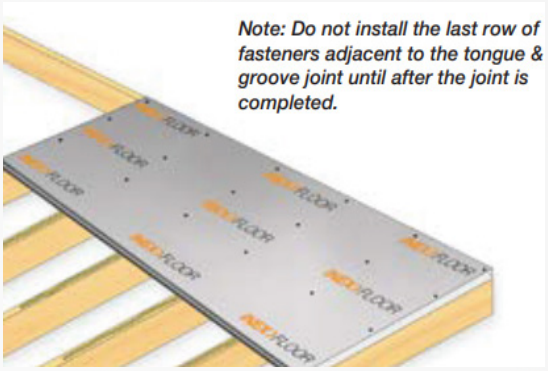


INSTALLATION STEPS

1

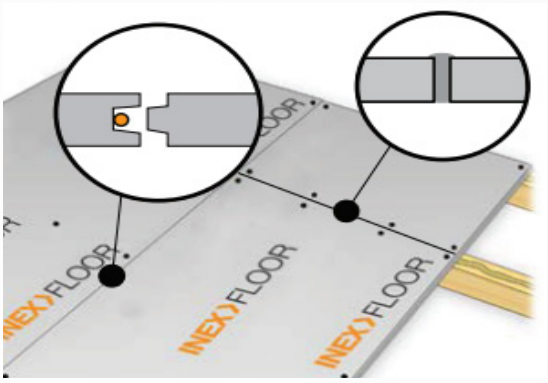
When fixing Inex to the joists it's good practice to apply a 6mm diameter bead of InexBOND or equivalent to bond Inex to the frame even when mechanical fixings are used. This will fill any gaps arising from acceptable construction tolerances and minimise the possibility of a 'squeaky' floor developing as the floor ages.

2



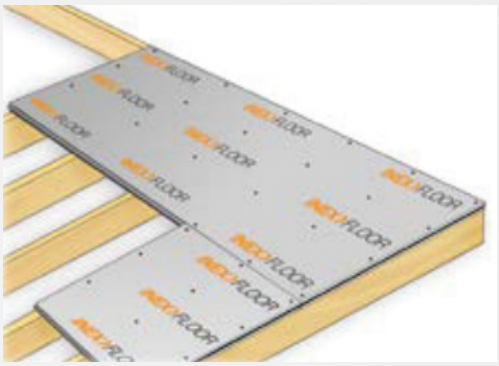
Install the first Inex sheet as per the layout plan similar to Square Pattern or Staggered Pattern, with the long edge installed perpendicular to the joists.

3



Before assembling the tongue and groove joints ensure that a 2mm to 3mm diameter bead of InexBOND or equivalent is in place, along the full joint length at bottom of groove.

4



Use the tongue & groove joint to install the second sheet. Then install the 1st row of fasteners in the second sheet before installing the final row of fasteners in the first sheet. Ensure fixings are min. 20mm from tongue and grooves, min. 12mm from butt joints, min. 50mm from all corners and max. 200mm centres along the joists.

Alternative method of screwing Inex to steel or timber joists using automatic screw gun

5

For assistance contact Trafalgar Fire's technical team at *technical@tgroup.com.au*

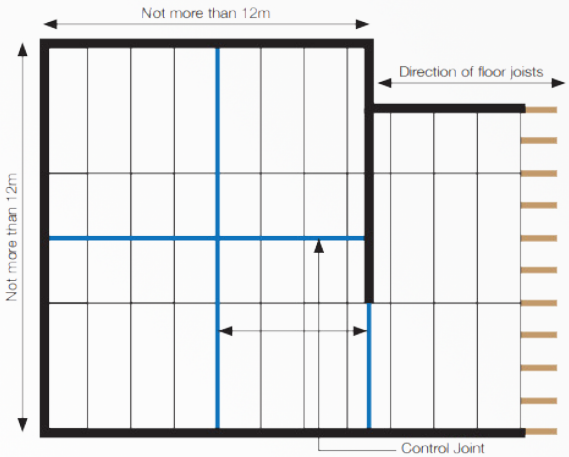
CONTROL JOINTS

For tiled or painted / coated Inex in wet and dry areas only

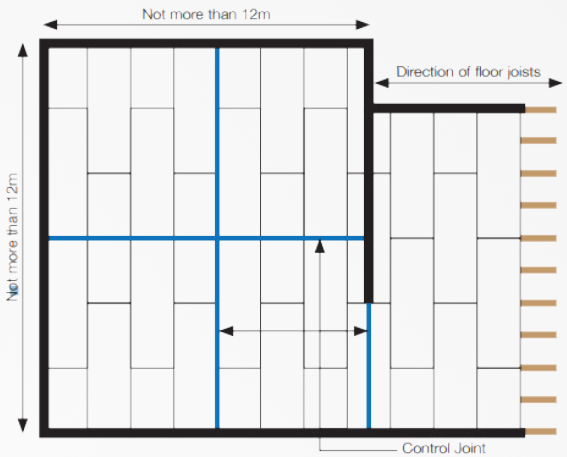
Movement control joints in the floor sheets and tiles are to be provided where the floor dimensions exceed 6m in the long sheet direction, at changes of direction in the floor and at openings such as doorways or where existing structural joints are located.
Control joints should be installed symmetrically about the centre of the floor and be approximately 5mm in width. The tiles must not overlay the control joints.

NOTE: No control joints are required in the flooring sheets when covered with vinyl and carpet unless there is a structural joint in place or otherwise specified by code and regulation. For external decks a lesser control joint spacing may be required depending on the deck's function and finishing system.

Control Joints Layouts Leave a 5mm gap between both the Inex sheets and tiles. Place a 10mm foam backing rod in the bottom of the joint with InexBOND or equivalent adhesive/sealant as per
directions on the Product Data Sheet.



SQUARE PATTERN

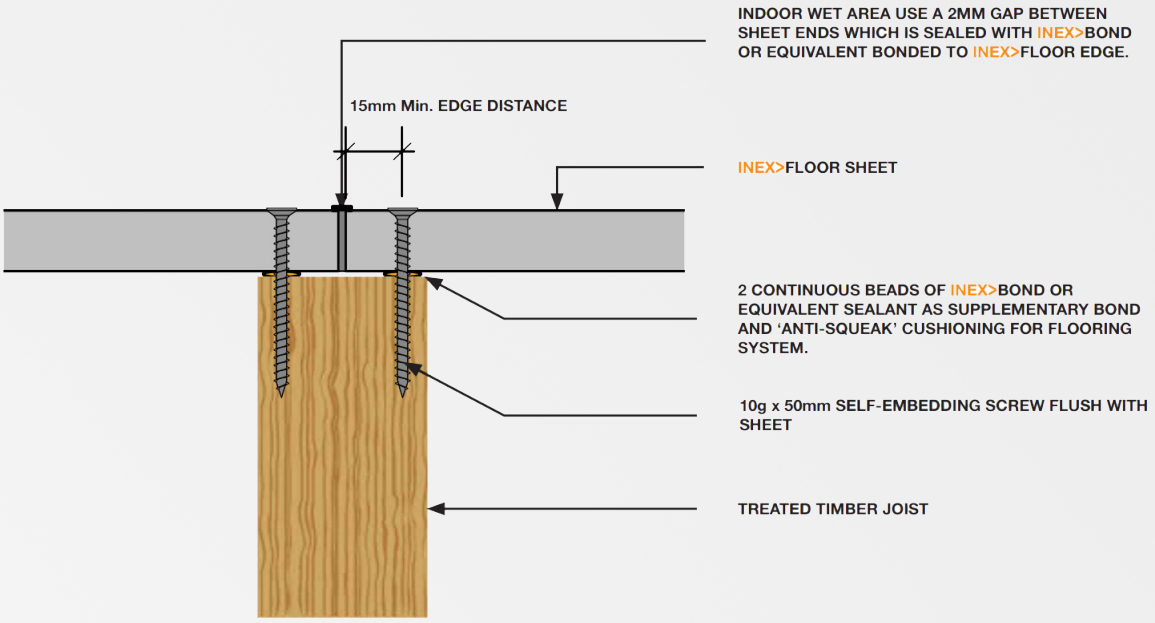


STAGGERED PATTERN

For tiled finishes Inex sheets must be installed with the rough side up. For carpet, vinyl or timber, sheets must be installed with the rough side up. For a polished concrete look install smooth side up and finish with a suggested clear coating.

NOTE: Avoid excessive foot traffic on the floor for at least 24 hours to allow sealant to cure. Cool and low humidity weather conditions may increase this period to 48–72 hours. Protect the surface of the sheets from damage until final finish is applied.

Butt and Control Joints for Inexs In Internal Wet Areas and Outdoor Waterproof Decks



For assistance contact Trafalgar Fire's technical team at *technical@tgroup.com.au*

FAQ

Q Can I use Inex on external decks/verandahs/balconies?

A Where Inex is used on external decks, verandah and balconies (for tiled finishes and similar) a waterproofing membrane must be applied prior to application of any finishes, even if the area below the deck does not require waterproofing. This is because supports best practice construction and such a membrane will provide long term protection to; the Inex sheets & their fixings, together with the support structure and its fixings.

Where waterproofing is required ensure before assembling the tongue and groove joints between the long sides of Inex sheets that the groove (of the tongue and groove joint) has a 2.5mm to 3mm diameter bead of InexBOND or equivalent extruded along the bottom of the groove. Use un-cut InexBOND or equivalent nozzles to automatically get the desired bead diameter. Use a spatula to remove any excess InexBOND or equivalent squeezed out of these tongue and groove joints after they are fitted.

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