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LARSEN

TILING





**Larsen Building Products,
as part of the Larsen group
of companies, has been
manufacturing quality
building products since
establishment in 1975.**

Our wide experience within the tiling market draws on the expertise and breadth of knowledge gained over the last 45 years to provide an unsurpassed level of technical back-up and know-how. Larsen has grown to become a market leading manufacturer of a comprehensive range of products for the construction industry. Larsen's continued growth has been facilitated with the completion of a purpose-built manufacturing facility in the Port of Belfast. This industry leading, computer-controlled facility has a production capacity of over 2,000 bags of product per hour.

LARSEN
TILING





Our premium tiling range has been developed for the professional contractor and balances technical merit and user friendliness without compromising either.

With all products manufactured under an ISO9001 quality system and with our plant certified to ISO14001, it is clear that we take both our product quality and environmental responsibilities seriously. This has helped to ensure that our tiling range of products have been used on many prestigious projects including car showrooms, retail outlets and leisure facilities.



PRODUCTS

12
ADHESIVES

18
GROUT

24
LEVEL

30
PREPARE

40
MAINTAIN

44
TECHNICAL

LARSEN

TILING



PRIDE IN OUR PERFORMANCE



Our tiling materials have been used throughout the UK and Europe over the last 20 years in commercial, industrial and residential projects. Larsen's proven technologies offer reliability, assurance and ease of use for contractors. On the right are some project examples.

LARSEN

TILING

Motor Showroom

SPECIFICATION GUIDE TILING RANGE
ADHESIVES GROUT LEVEL PREPARE MAINTAIN

HOTEL & LEISURE



NEW HOMES / DEVELOPMENTS



RETAIL



AUTOMOTIVE



COMMERCIAL / CORPORATE



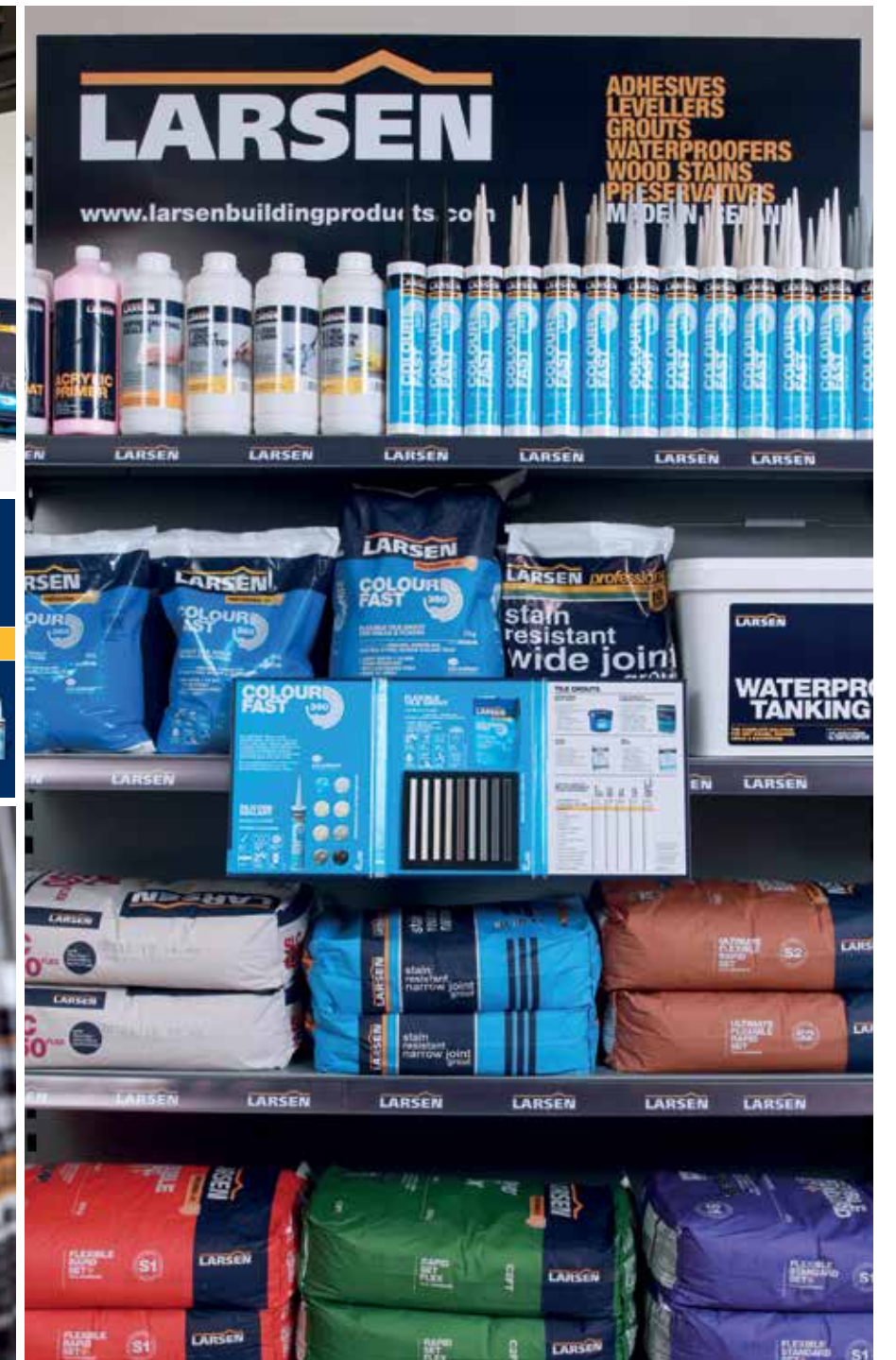
STICK WITH LARSEN

From adhesives through to grouts, from preparation to finish, you can rely on Larsen with confidence. Look out for your approved local Larsen stockist.

Sales support is always backed up with new and easy to use solutions from the the grout selector folders, that are extremely retailer friendly, to the silicone displays that offer a highly visible branded sales option to maximise floor space.



TILING



PRODUCTS AND SERVICE



New Product Development

New product development is our mantra. The requirements of our markets and customers are of paramount importance to Larsen and so we push ourselves constantly to improve our product portfolio. All of the research and development work carried out at Larsen is focused on delivering quality products and value for money whilst keeping a watchful eye on decreasing environmental impact. At our state-of-the-art facilities our chemists rigorously research, formulate and test the next generation of products and constantly strive for continuous improvement.

Customer Service

At Larsen we believe in speaking with our customers directly. Our highly trained sales support team will deal with your order or query with the same level of professionalism. They will ensure you are provided with accurate and pertinent information, that your call is handled competently and to your complete satisfaction.

Logistics

From our manufacturing plant we offer a 48 hour delivery service to anywhere in the British Isles. We can arrange site deliveries to reduce handling and improve efficiency.

Technical and Site Support

Within this environment, Larsen Professional Tiling has evolved and developed and we now possess a formidable range of products for the modern era. With our first class technical back-up and support team we can assist our customers with specification, recommendations and offer a product solution.



TILING

All Larsen materials are made with the professional tiler in mind combined with extensive research and development to consistently release products that perform. From the highly regarded Professional range formulated totally around key features to the multi-functional successful Trade range. Whatever your requirement, Larsen have the answer.

LARSEN

**TILE
ADHESIVE
RANGE**



Larsen Professional tiling range is designed and formulated with key characteristics always in mind like S1 and S2 BS EN12004 accreditation for deformable adhesives. Polymers, sands including colour and texture, additives and all components are carefully selected and have to be fully approved to be allowed entry to the Professional Brand.



Professional Ultimate Flexible Rapid Set is a specially formulated, highly flexible, S2 rated, fast setting, cement based adhesive. Recommended for use on more difficult substrates.



Professional Flexible Rapid Set+ is a specially formulated, fully flexible, S1 rated, fast setting, cement based adhesive.



Fiberflex™ Semi-Rapid Set+ is a specially formulated, fully flexible, S1 rated, microfibre reinforced, non-slip, cement-based adhesive.



Professional Flexible Standard Set+ is a specially-formulated, fully flexible, S1 rated, non-slip, standard-setting, cement-based adhesive with extended open time.



Professional Rapid Set Flex is a specially formulated, flexible, non-slip, fast setting, cement based adhesive.



Professional Standard Set Flex is suitable for fixing most types of tiles including porcelain, natural stone and large format tiles.

ULTIMATE FLEXIBLE RAPID SET	FLEXIBLE RAPID SET+	FIBERFLEX™ SEMI-RAPID SET+
Suitable for: Porcelain, ceramic, natural stone and most tile types. For walls and floors, interior and exterior.	Suitable for: Porcelain, ceramic, natural stone and most tile types. For walls and floors, interior and exterior.	Suitable for: Large format panels, porcelain, ceramic and natural stone tiles. For walls and floors, interior and exterior.
Bed depth: 3-12mm Pot life: 45 mins Set time: 3 hours	Bed depth: 3-20mm Pot life: 45 mins Set time: 3 hours	Bed depth: 3-20mm Pot life: 2 hours Set time: 6 hours

Suitable for use on all common substrates and is particularly recommended for tongue & groove floorboards. As well as the high flexibility, it gives an exceptionally high bond strength making it ideal for use in high traffic areas including shopping centres, schools and hospitals.

Suitable for fixing most tile types and is recommended for fully vitrified tiles, natural stone, glass mosaics and large format tiles. It is recommended for use on more demanding substrates including heated screeds, overboarded timber and swimming pools.

Semi-rapid setting binder has been developed to provide a long pot life and open time but with subsequent rapid strength development. This is coupled with the advanced Hydro Gel technology which gives a soft, easy to use thixotropic adhesive ideal for use with modern large format tiles.

C2F
S2
EN 12004

INTERNAL & EXTERNAL

POLYMER MODIFIED

SWIMMING POOLS & WET ROOMS

UNDERFLOOR HEATING

OVERBOARDED FLOORS

NON SLIP

EXTRA LARGE FORMAT TILES

DIRECT TO FLOOR BOARDS & PLYWOOD

C2F
S1
EN 12004

INTERNAL & EXTERNAL

POLYMER MODIFIED

SWIMMING POOLS & WET ROOMS

UNDERFLOOR HEATING

OVERBOARDED FLOORS

NON SLIP

EXTRA LARGE FORMAT TILES

C2TE
S1
EN 12004

INTERNAL & EXTERNAL

POLYMER MODIFIED

SWIMMING POOLS & WET ROOMS

ADVANCED
HYDRO
GEL
TECHNOLOGY

UNDERFLOOR HEATING

OVERBOARDED FLOORS

NON SLIP

EXTRA LARGE FORMAT TILES

FLEXIBLE STANDARD SET+	RAPID SET FLEX	STANDARD SET FLEX
Suitable for: Porcelain, ceramic, natural stone and most tile types. For walls and floors, interior and exterior.	Suitable for: Porcelain, ceramic, natural stone and most tile types. For walls and floors, interior and exterior.	Suitable for: Porcelain, ceramic, natural stone and most tile types. For walls and floors, interior and exterior.
Bed depth: 3-20mm Pot life: 5 hours Set time: 18 hours	Bed depth: 3-12mm Pot life: 45 mins Set time: 3 hours	Bed depth: 3-12mm Pot life: 5 hours Set time: 24 hours

Suitable for fixing most types of tile and is recommended for fixing glass mosaics, porcelain, natural stone and large format tiles. Ideal for use on more demanding areas, on timber substrates and in swimming pools.

Suitable for fixing ceramic, porcelain, large format natural stone and mosaic tiles to a variety of substrates including heated screeds and overboarded timber.

Suitable for use in more demanding areas including with large format wall tiles, on timber substrates and in swimming pools.

C2TE
S1
EN 12004

INTERNAL & EXTERNAL

POLYMER MODIFIED

SWIMMING POOLS & WET ROOMS

UNDERFLOOR HEATING

OVERBOARDED FLOORS

NON SLIP

EXTRA LARGE FORMAT TILES

C2FT
EN 12004

INTERNAL & EXTERNAL

POLYMER MODIFIED

UNDERFLOOR HEATING

OVERBOARDED FLOORS

NON SLIP

C2TE
EN 12004

INTERNAL & EXTERNAL

POLYMER MODIFIED

UNDERFLOOR HEATING

OVERBOARDED FLOORS

NON SLIP

Larsen Trade tiling range is a specially formulated compact range that offers multifunctional use from a compact range. All manufactured in accordance with the strict requirements of BS EN12004.



Trade Fast Set Flex is a specially formulated, flexible, non-slip, fast setting, cement-based adhesive.



Trade Semi-fast Set Flex a fully flexible, S1 rated, microfibre reinforced, non-slip, cement-based adhesive.



Trade Fast Set is a specially formulated, fast setting, cement-based adhesive.



Trade Standard Set Flex is a specially-formulated, high grab, non-slip, polymer modified, cement-based adhesive.



Professional Showerproof is a high grab, non-slip, mould resistant, ready-mixed, thin-bed wall tile adhesive.



Trade Showerproof is a high grab, non-slip, mould resistant, ready-mixed, thin-bed wall tile adhesive.

FAST SET FLEX	SEMI-FAST SET FLEX	FAST SET
Suitable for: Porcelain, ceramic, natural stone, large format and mosaic tiles. For walls and floors, interior / exterior.	Suitable for: Large format panels, porcelain, ceramic and natural stone tiles. For walls/floors, interior/exterior.	Suitable for: Porcelain, ceramic, natural stone and most tile types. For walls and floors, internal use.
Bed depth: 3-12mm Pot life: 45 mins Set time: 3 hours	Bed depth: 3-12mm Pot life: 120 mins Set time: 6 hours	Bed depth: 3-12mm Pot life: 45 mins Set time: 3 hours

It is suitable on a variety of substrates including heated screeds and overboarded timber.

Semi-rapid setting binder has been developed to provide a long pot life and open time but with subsequent rapid strength development. This is coupled with the advanced Hydro Gel technology which gives a soft, easy to use thixotropic adhesive ideal for use with modern large format tiles.

Mainly used for up to 6mm bed depth, it can be used up to 12mm in isolated areas. It is suitable for fixing ceramic and porcelain tiles to most stable substrates and with the inclusion of Larsen Flexibiliser, can be used on underfloor heating and overboarded timber.

EN 12004 C2FT	10 YEAR GUARANTEE	INTERNAL & EXTERNAL	POLYMER MODIFIED
UNDERFLOOR HEATING	OVERBOARDED FLOOR	NON SLIP	FAST SET

EN 12004 C2TE S1	10 YEAR GUARANTEE	INTERNAL & EXTERNAL	POLYMER MODIFIED	ADVANCED HYDRO GEL TECHNOLOGY
UNDERFLOOR HEATING	OVERBOARDED FLOOR	NON SLIP	EXTRA LARGE FORMAT TILES	

EN 12004 C1F	INTERNAL TILING	POLYMER MODIFIED
10 YEAR GUARANTEE	FAST SET	

STANDARD SET FLEX
Suitable for: Porcelain, ceramic, natural stone and most tile types. For walls and floors, interior and exterior.
Bed depth: 3-12mm Pot life: 5 hours Set time: 24 hours






It is suitable for both thin and thick bed applications and for use in more demanding areas including with large format tiles and in swimming pools.

EN 12004 C2TE	10 YEAR GUARANTEE	INTERNAL & EXTERNAL	POLYMER MODIFIED
UNDERFLOOR HEATING	OVERBOARDED FLOOR	NON SLIP	STANDARD SET

PROFESSIONAL SHOWERPROOF	SHOWERPROOF
Suitable for: Ceramic, natural stone and most porous tile types. For walls, internal use.	Suitable for: Ceramic, natural stone and most porous tile types. For walls, internal use.
Bed depth: up to 3mm Pot life: 20 mins Set time: 24 hours	Bed depth: up to 3mm Pot life: 20 mins Set time: 24 hours

It is designed for fixing interior ceramic wall tiles and mosaics in domestic showers, kitchens and bathrooms. It can be used on flat internal walls including plasterboard, sand and cement render and gypsum plaster.

It is designed for fixing interior ceramic wall tiles and mosaics in domestic showers, kitchens and bathrooms. It can be used on flat internal walls including plasterboard, sand and cement render and gypsum plaster.

EN 12004 D1T	10 YEAR GUARANTEE	 INTERNAL TILING	
 NON SLIP	 STANDARD SET	 MOULD RESISTANT	 STRONG BOND

EN 12004 D1T	10 YEAR GUARANTEE	INTERNAL TILING
NON SLIP	STANDARD SET	MOULD RESISTANT

Grouts play a major part in the overall finish of any tiling project, so here at Larsen we have a full range of technologically advanced formulations manufactured to the highest standards providing a breadth of options to suit any requirement. Achieve a finish to be proud of - whatever the tile, joint width or background, Larsen will have a solution you can trust.

LARSEN

**TILE
GROUT
RANGE**



Larsen Professional Colourfast 360 is a specially formulated, flexible, rapid setting tile grout. This advanced formulation uses Colourfast Technology to ensure uniform joint colour, free from efflorescence.

Larsen Professional Colourfast 360 is suitable for use as a flexible wall and floor grout.

The fine texture provides a smooth, stain, mould and water resistant finish that is suitable for use on most tile types including glazed and unglazed ceramic, porcelain, natural stone and glass tiles.

This range also has a range of matching premium grade non-shrink silicones and to further enhance the finish, there is the availability of colour matched expansion joints from leading manufacturer Dural.



Larsen grout selector

TILE GROUT
COLOUR RANGE



SILICONE SEALANT
COLOUR RANGE



Colourfast 360 is a specially formulated, flexible, rapid setting tile grout. This advanced formulation uses Colourfast Technology to ensure uniform joint colour, free from efflorescence.

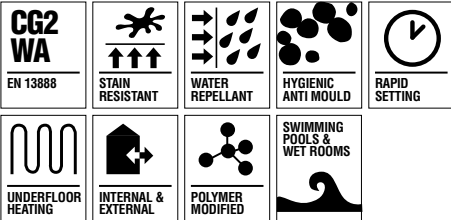
Colourfast 360 Silicone is a premium quality, one part low modulus elastic sealant based on acetoxycuring polysiloxanes for sanitary and construction applications.

COLOURFAST 360 GROUT

Suitable for:
Most tile types (glazed/unglazed) ceramic, porcelain, natural stone, mosaic and glass tiles.

Joint width: 1-15mm
Pot life: 30-40 mins
Set time: 3 hours light foot / 24 hrs full traffic

Professional Colourfast 360 is suitable for use as a flexible wall and floor grout. The fine texture provides a smooth, stain, mould and water resistant finish.

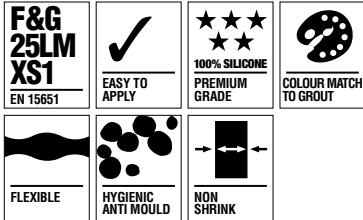


COLOURFAST 360 SILICONE

Suitable for:
Baths, basins, shower enclosures, toilets, glass and glazed tile surrounds.

Solvent free
Premium grade
Fast curing

After application Colourfast 360 silicone cures to provide a non-shrink, durable, waterproof elastic seal with low dirt pick-up and mould resistance. It is available in a range of colours to complement Colourfast 360 Tile Grout.





Professional Stain Resistant Narrow Joint Grout is a specially formulated, flexible, cement based, narrow joint grout.



Professional Stain Resistant Wide Joint Grout is a specially formulated, flexible, cement based, wide joint grout.



Epoxy Grout is a three-part solvent-free tile grout based on epoxy resins and specially selected fillers.



Flexible Floor Grout is a specially formulated, polymer modified, cement based, wide joint grout.



Floor Grout is a specially formulated, cement based, wide joint tile grout.



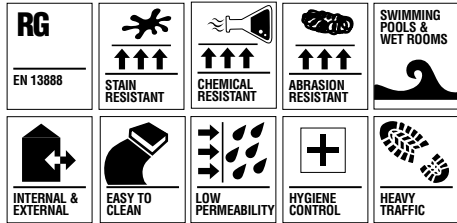
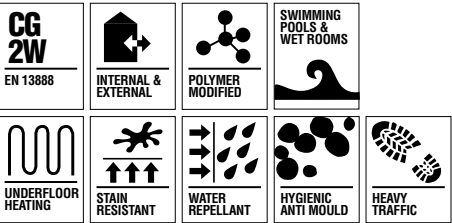
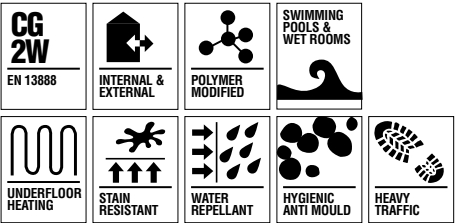
Wall Grout is a specially formulated, cement-based, narrow joint tile grout.

STAIN RESISTANT NARROW JOINT	STAIN RESISTANT WIDE JOINT	EPOXY GROUT
<p>Suitable for: Ceramic, fully vitrified tiles, natural stone and mosaics. For walls and floors, interior and exterior.</p> <p>Joint width: up to 4mm Pot life: 1 hour Set time: 12-24 hrs light foot / 24-48 hrs full traffic</p>	<p>Suitable for: Ceramic, fully vitrified tiles, natural stone and mosaics. For walls and floors, interior and exterior.</p> <p>Joint width: 2-20mm Pot life: 1 hour Set time: 12-24 hrs light foot / 24-48 hrs full traffic</p>	<p>Suitable for: Ceramic, fully vitrified tiles, natural stone and mosaics. For walls and floors, interior and exterior.</p> <p>Joint width: 2-20mm Pot life: 40-50 mins Set time: 3 hours light foot / 24 hrs full traffic</p>

Manufactured using high quality fine fillers to improve ease of finishing and high performance additives and polymers to resist dirt pick-up. It can be used in a variety of applications including over heated screeds, in power showers and swimming pools.

Manufactured using high quality fine fillers to improve ease of finishing and high performance additives and polymers to resist dirt pick-up. It can be used in a variety of applications including over heated screeds, in power showers, external patios and swimming pools.

Epoxy Grout is suitable for areas under strict hygiene control by providing joints with low permeability to water and liquids. Epoxy Grout is resistant to corrosion, chemicals, and abrasion and is easily cleaned.

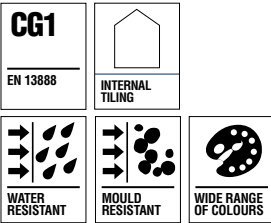
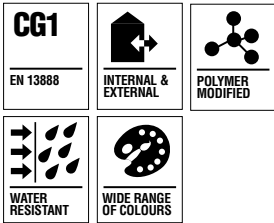


FLEXIBLE FLOOR GROUT	FLOOR GROUT	WALL GROUT
<p>Suitable for: Glazed and unglazed tiles and has excellent adhesion to all tiles. For internal and external floors.</p> <p>Joint width: 3-20mm Pot life: 1 hour Set time: 12-24 hrs light foot / 24-48 hrs full traffic</p>	<p>Suitable for: Glazed and unglazed tiles and has excellent adhesion to all tiles. For internal and external floors.</p> <p>Joint width: 3-12mm Pot life: 1 hour Set time: 12-24 hrs light foot / 24-48 hrs full traffic</p>	<p>Suitable for: Porcelain, ceramic, natural stone and most tile types. For walls and floors, internal use.</p> <p>Joint width: up to 3mm Pot life: 1 hour Set time: 12-24 hrs light foot / 24-48 hrs full traffic</p>

Flexible Floor Grout is a high quality, polymer modified, cement based floor tile grout and is ideal for use in areas of limited movement.

Floor Tile Grout is a high quality, cement based wide joint grout. It is manufactured from a blend of specially selected sands, cement and additives to provide an easy-to-use water resistant grout.

Manufactured using high quality fine fillers to improve ease of finishing. Wall Grout is suitable for use with glazed and unglazed tiles and has excellent adhesion to all tile types. Wall Grout is water and mould-resistant and is suitable for use in kitchens, bathrooms and shower enclosures.



Subfloor preparation is an increasingly specialist area due to the variety of floor finishes and varying locations. There is also pressure for faster installation times, so contractors need products they can rely on every time. A smooth, flat subfloor is essential for any successful tiling installation.

The use of underfloor heating and larger format tiles has seen a dramatic increase in the use of levelling and smoothing compounds. Time spent on preparation really does benefit in the long run and ensures a flawless result.

LARSEN

**FLOOR
LEVELLING
RANGE**



FLOOR LEVELLING RANGE

Larsen SLC1550 and SLC3015 use Fiberflex™ technology to provide a 3-dimensional internal reinforcement structure. Millions of fibres per bag reduce shrinkage, stop crack propagation and prevent impact damage. This advanced fibre technology results in a reliable, high performance base for tiling.



Larsen have been leaders in Fibre reinforced technology and have been producing the market leading compound SLC1550 for over 20 years.



SINGLE PART WATER BASED



SLC1550 FLEX is a single pack, fast-drying, universal renovation screed with Fiberflex™ microfibre technology.

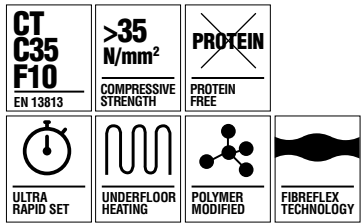
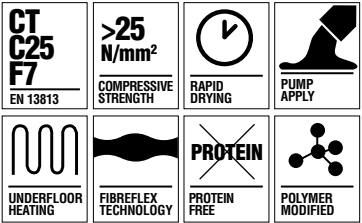


SLC3015 FAST is a single pack, ultra-rapid setting, hand or pump applied cement based levelling compound. Specially formulated using advanced binder technology, it is ideal when a fast track solution is required.

SLC1550 FLEX	SLC3015 FAST
Coverage: 2.5-3m² per pack @5mm	Coverage: approx 4.5m² per pack @3mm
Bed depth: 3-50mm	Bed depth: 2-15mm
Working time: 30 mins	Working time: 15 mins
Foot traffic: 2-4 hours	Foot traffic: 30 mins
Floor covering: 24 hours	Floor covering: Tile: 30-45min; Vinyl: from 45mins

For use in fast track domestic and commercial situations, such as, where levelling of up to 50mm is required or for use over underfloor heating and on more difficult substrates, e.g. timber. It does not provide a wearing finish but provides an ideal surface to receive resilient floor finishes including: carpet, natural stone, ceramic tiles, vinyl, resin coatings, etc. It is ideal for offices, dwellings, schools, hospitals, airports, etc.

Suitable for use on all common substrates including underfloor heating systems and timber substrates. It is ideal for encapsulating electric underfloor heating elements prior to the application of tiles and/or soft flooring. The product has excellent flow and self-levelling properties making it suitable for a wide range of both commercial and domestic applications.



SINGLE PART
WATER BASED



SLC2000 INDUSTRIAL is a single pack, fast-drying, hand or pump-applied, cement-based levelling screed for the renovation of concrete floors.



SLC1500 COMMERCIAL Is a single pack, fast-drying, hand or pump-applied cement-based underlayment.



SLC106 OPL is a single pack latex, hand or pump-applied cement-based underlayment.

SLC2000	SLC1500	SLC106
Coverage: 3.2m² per pack @5mm Bed depth: 5-30mm Working time: 30 mins Foot traffic: 2-4 hours Floor covering: 24-48 hours	Coverage: 3m² per pack @5mm Bed depth: feather-25mm Working time: 30 mins Foot traffic: 2-4 hours Floor covering: 24 hours	Coverage: 5-5.5m² per pack @3mm Bed depth: feather-6mm Working time: 30 mins Foot traffic: 2-4 hours Floor covering: 12-24 hours

For use in fast track commercial and industrial situations where a wearing finish is required or when finishes need to be applied quickly. It is ideal for warehouses, production areas and similar areas where a hardwearing level finish is required. SLC 2000 Industrial can be over-coated with epoxy coatings, etc. to further improve abrasion resistance, aesthetics and chemical resistance.

For use in fast track domestic and commercial situations, such as, where levelling of up to 25mm is required, or when finishes need to be applied quickly. It is ideal for offices, dwellings, schools, hospitals, airports, etc. and is suitable for use over underfloor heating. SLC1500 should be overlaid with a suitable resilient floor finish (e.g. carpet, ceramic tiles, vinyl, resin coatings, etc).

For use in fast track domestic and commercial situations, such as, where levelling of up to 6mm is required or when finishes need to be applied quickly. It is ideal for offices, dwellings, schools, hospitals, airports, etc. and is suitable for use over underfloor heating. SLC106 OPL must be overlaid with a suitable resilient floor finish (e.g. carpet, ceramic tiles, vinyl, etc).

CT C30 F7 RWA20 EN 13813

>30 N/mm²

COMPRESSIVE STRENGTH

15%

RECYCLED MATERIALS

PROTEIN FREE

PUMP APPLY

INDUSTRIAL FINISH

HIGH STRENGTH

RAPID DRYING

POLYMER MODIFIED

CT C25 F7 EN 13813

>25 N/mm²

COMPRESSIVE STRENGTH

25%

RECYCLED MATERIALS

PROTEIN FREE

UNDERFLOOR HEATING

PUMP APPLY

POLYMER MODIFIED

SUPER FINE FINISH

RAPID DRYING

CT C20 F5 EN 13813

>20 N/mm²

COMPRESSIVE STRENGTH

PROTEIN FREE

UNDERFLOOR HEATING

PUMP APPLY

POLYMER MODIFIED

SINGLE PART
EXTERNAL



SLC2500 EXTERNAL is a single pack, fast drying, hand or pump applied cement based levelling topping designed to eliminate surface irregularities and smooth internal and external concrete surfaces exposed to industrial traffic.

SLC2500
Coverage: 3m² per pack @5mm Bed depth: 5-15mm Working time: 30 mins Foot traffic: 2-4 hours Vehicle traffic: after 48 hours

For use internally and externally to smooth and level rough or damaged concrete and screeds. It is ideally suited for smoothing areas such as paths, balconies, patios, garages and yards and is unaffected by rain or frost once fully cured. It is also suitable for smoothing concrete prior to the installation of tiles externally.

CT C30 F7 RWA20 EN 13813

>30 N/mm²

COMPRESSIVE STRENGTH

15%

RECYCLED MATERIALS

PROTEIN FREE

INTERNAL & EXTERNAL

PUMP APPLY

POLYMER MODIFIED

HIGH STRENGTH

RAPID DRYING

2 PART
LATEX BASED



Lartex Flo is a specially formulated, professional latex designed for the contractor with added characteristics of being moisture tolerant and is capable of bonding over light adhesive residues.

LARTEX FLO
Coverage: approx 4.5m² per pack @3mm Bed depth: feather-10mm Working time: 30 mins Foot traffic: 2-4 hours Floor covering: 12-24 hours

Lartex Flo can be used to prepare most rigid surfaces prior to the installation of floor coverings such as vinyl, carpet and ceramic floor tiles. It can be used on sub floors such as sand / cement screed, concrete, correctly prepared wooden floors, over underfloor and under tile heating, flooring grade asphalt and floors with minor adhesive residue contamination. Free from casein or other proteins and is therefore suitable for use in biologically sensitive areas.

CT C20 F5 EN 13813

>20 N/mm²

COMPRESSIVE STRENGTH

UNDERFLOOR HEATING

MOISTURE TOLERANT



Lartex NA is a superior blend, high performance 2-part latex. This No Ammonia latex exhibits rapid drying and hardening characteristics and is capable of bonding over old adhesive residues.

LARTEX NA
Coverage: approx 5m² per pack @3mm Bed depth: feather-12mm Working time: 20 mins Foot traffic: 1-2 hours Floor covering: 4-6 hours

Lartex NA exhibits excellent adhesion to a variety of substrates and has high flexibility allowing it to be used over most old adhesive residues and over or under Larsen DPM. Lartex NA can be used from feather edge up to 10mm and up to 30mm when bulked out with 3mm aggregate. The rapid setting and drying allow coverings to be installed after as soon as 4-6 hours.

CT C20 F7 EN 13813

>20 N/mm²

COMPRESSIVE STRENGTH

N/A

UNDERFLOOR HEATING

MOISTURE TOLERANT

RAPID DRYING

NO AMMONIA

Fast-track methods help alleviate pressure to reduce installation times.

Successful tiling projects involve the consideration of:

- the type of construction of the building
 - movement of the substrate
 - substrate preparation
 - correct priming *and*
 - selection of appropriate adhesives/grouts.
- All of these elements need to be addressed.

LARSEN

**PRIME
AND
PREPARE**



PRIME AND PREPARE

In order to achieve a successful tiling installation, it is important to ensure that the substrate is correctly prepared.

The substrate must be sound and suitably dry, sufficiently strong, rigid and durable to support the tiling installation for the intended duty and traffic. It must be free from dust, grease, loose materials and any other contaminant which may interfere with the bond.

It should be suitably level for the fixing method being used, particularly when using ready mixed adhesives which have a maximum bed depth of 3mm.

Priming may be required to improve the bond to some surfaces but should never be used to make good a poor substrate. In wet areas some substrates require protection with a suitable tanking system.



Primer Grip 360 is a hybrid primer for the ultimate mechanical key. It is a high performance bonding agent for tiling. Rapid drying, it can be tiled over or levelled in as little as 15 minutes.

PRIMER GRIP 360

Suitable for:

- adhesives and levelling compounds
- porous / non-porous substrates

Coverage: 5-10m² / kg
dependent upon surface texture and porosity

It is designed to provide an improved mechanical key to all common absorbent and non-absorbent backgrounds including plaster, plasterboard, timber, concrete, epoxy DPM, flooring grade asphalt and glazed tiles.



NP Keycoat Primer is a specially formulated high performance polymer based primer for non-porous substrates. It provides excellent bond adhesion for more awkward substrates, including unsanded DPM.

NP KEYCOAT PRIMER

Suitable for:

- porous and non-porous substrates
- universal primer

Coverage: 7-10m² neat / L
or 50m² dilute / L
(dilution ratio 4pts water : 1pt NP Keycoat Primer)
dependent upon surface texture and porosity

Supplied ready to use, it is formulated for use on demanding substrates prior to tiling or levelling. It is ideal for priming one coat DPMs, tiled floors and metal substrates. NP Keycoat can also be diluted for use on porous substrates as a general purpose primer to reduce the absorption of the substrate before applying tile adhesives and levelling compounds.



Acrylic Primer is a ready to use primer for use on porous and difficult substrates prior to tiling or screeding, or to seal gypsum plasters or screeds prior to the addition of cement based adhesives.

ACRYLIC PRIMER

Suitable for:

- as a primer, it is ideal for reducing absorbency
- improves bond on porous substrates.

Coverage: 7-10m² neat / L
diluted 1-1: 14-20 m² / L
dependent upon surface texture and porosity

It can be used neat when sealing substrates or diluted with an equal quantity of water for general priming.

Water based
Coloured for identification



EU Primer is a universal two pack epoxy primer for use with both resin and cement-based systems. It provides high strength bonding of self-levelling compounds, repair mortars, epoxy screeds, mortars and coatings to a variety of substrates.

EU PRIMER

Suitable for:

- as a primer, it is ideal for very high traffic areas and difficult substrates

Coverage: 4-5m²/kg
dependent upon surface texture and porosity

EU Primer acts as an adhesive membrane and will improve the chemical, water and vapour permeability resistance of surfaces. It may also be used as a surface sealer for hardening screeds and concretes. EU Primer is the bonding agent in the HDS resin screed system.



Priming Slurry is a cementitious priming and bonding agent specially formulated for external 20mm porcelain and paving, when fixing onto a traditional sand and cement bed.

PRIMING SLURRY

Suitable for:

- as a primer or bonding agent, particularly with paving installation methods
- Internal and external use

Coverage: up to 19m²/25kg bag
dependent upon surface texture and porosity

Priming Slurry is manufactured using a blend of specially selected aggregates, cements and synthetic polymers. It requires only the addition of water to produce a high quality priming slurry to provide a binding bridge when installing porcelain and natural stone paving.

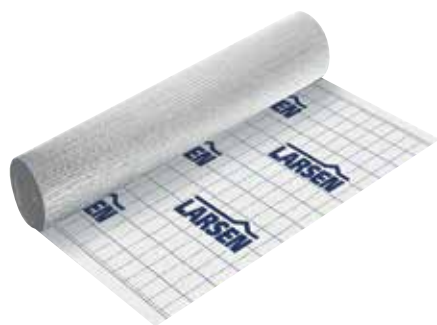
SINGLE PART EXTERNAL

SPECIFICATION GUIDE TILING RANGE
ADHESIVES GROUT LEVEL **PREPARE** MAINTAIN

TANKING & DECOUPLING

The inclusion of wet rooms in both commercial and residential projects feature more prominently than ever before. Larsen have the solution to ensure total confidence in the waterproofing stage prior to tiling and installation.

For the installer, application times and ease of use are the most critical points in the selection process whilst also having confidence that the system will last for years to come. Larsen have developed a user-friendly, time-efficient system that offers total confidence. It incorporates three simple steps: Prime, tape, coat and you're ready to go!



Duomat³⁶⁰ Anti-crack & Decoupling System is a low profile membrane providing a decoupling system for all floor tiling. Designed to accommodate and decouple lateral movement and stresses in substrates.

DUOMAT³⁶⁰ ANTI-CRACK & DECOUPLING SYSTEM

Suitable for:

Timber floors; wet rooms, natural stone, large format tiles, heated or cracked floors.

Quantity: 30m x 1m rolls

A low profile membrane providing a decoupling system for all floor tiling. Designed to accommodate and decouple lateral movement and stresses in substrates. Ideal for use with timber floors, natural stone, large format tiles, heated floors and cracked floors.

- Easy to install
- Minimal height build-up (<1mm)
- Ideal with underfloor heating



Waterproof Anti-Crack Membrane is a low profile membrane providing waterproofing and decoupling for all floor tiling.

WATERPROOF ANTI-CRACK MEMBRANE

Suitable for:

Timber floors; wet rooms; natural stone; large format; heated floors; cracked floors.

Quantity: 20m x 1m rolls

Innovative 3-ply membrane designed to accommodate and decouple lateral movement and stresses in substrates and protect from moisture migration. Minimal thickness: 0.9mm. Suitable for use on most common floor substrates.

- Easy to install
- Minimal height build-up (<1mm)
- Ideal with underfloor heating



Waterproof Tanking Kit is a versatile, multi-component system ideal for use in waterproofing applications and to provide secondary protection in tiling installations.

WATERPROOF TANKING KIT

Suitable for:

Power showers, wet rooms and sports facilities.

Pack Contains

- 0.5L Acrylic Primer
- 5Kg Tanking Membrane
- 5m Joint Sealing Tape

The complete solution for wet rooms, power showers, bathrooms and sports changing areas. The system comprises a water based liquid applied flexible membrane, a roll of self-adhesive tape and a primer.

Individual components are available separately and in larger trade size packs.



Flexible Shower Seal Tape is a self-adhesive, high performance waterproof sealing tape that can be applied directly to the wall-facing edge of shower trays, baths or worktops.

FLEXIBLE SHOWER SEAL TAPE

Suitable for:

Use in showers, bathrooms and kitchens.

Quantity: 3.6m roll per pack

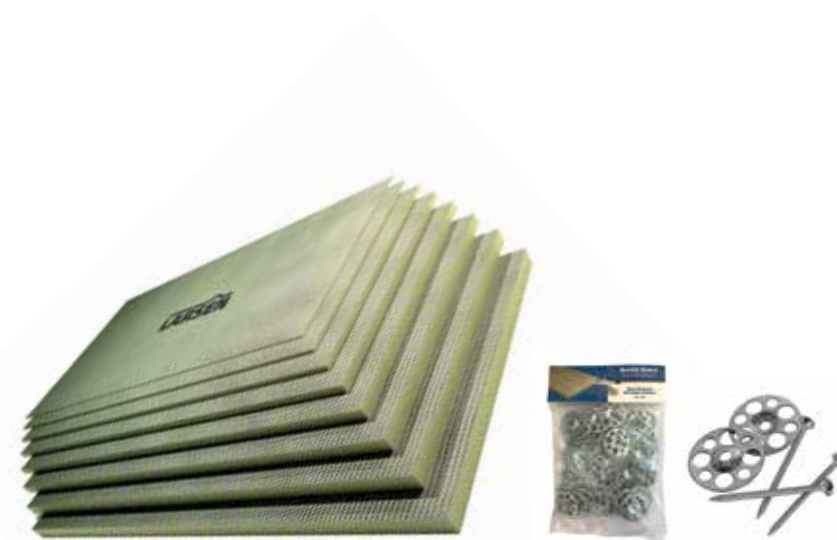
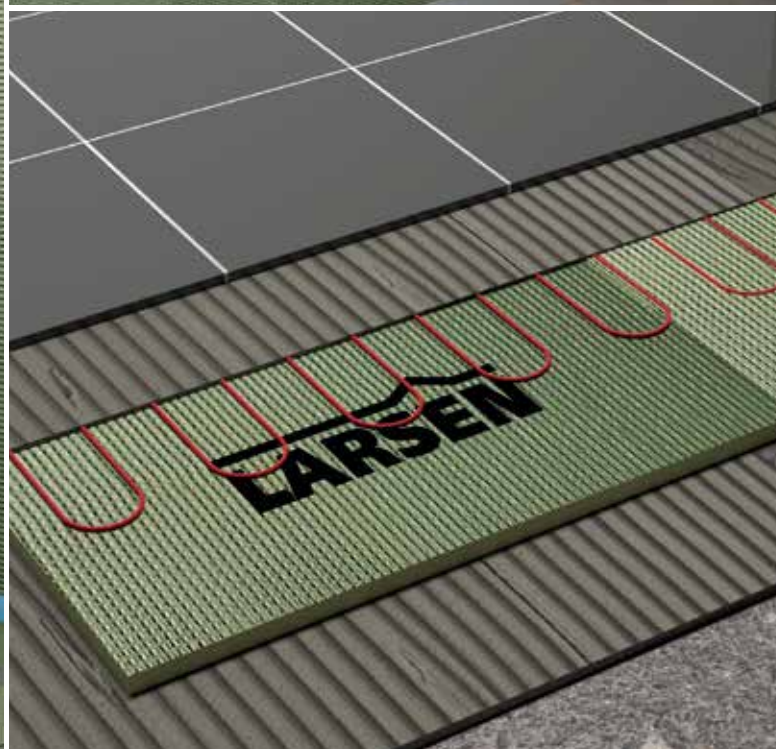
Used prior to installation, Flexible Shower Seal Tape provides a secure watertight seal.

THE PERFECT FINISH

Remember the use of a good quality silicone to finish see pages 20 & 21 for the Colourfast range of non-shrink, high grade options.



THERMAL CONSTRUCTION BOARDS



Larsen TRIPLEX³⁶⁰ Thermal Construction Board is a multi-purpose lightweight construction board, designed for the application of all tile types, cement based screeds and synthetic renders.

Washers & Fixings are required to secure the thermal boards and work in conjunction with the adhesive layer to form a secure base.



Larsen Flexible Butyl Tape is a ready for use self-adhesive butyl rubber flexible joint sealing tape.

TRIPLEX³⁶⁰ THERMAL CONSTRUCTION BOARD

Suitable for:

Use anywhere where tile is applied; on floors, walls, ceilings and even counter tops. Especially suitable for wet areas such as bathrooms and kitchens where walls and floors are particularly exposed to moisture.

It is manufactured using high density extruded polystyrene which provides excellent insulating properties. The extruded polystyrene core has a factory applied reinforced cement coating which provides excellent impact strength, sound reduction and fire resistance making them ideal for construction.

Size: 1200x600mm boards - 6mm, 10mm or 12.5mm thick.

Other sizes available to special order.

WASHERS & FIXINGS

Suitable for:

In addition to the adhesive layer, the boards must also be secured to the floor boarding with 25mm diameter fixing washers and screw with a countersunk head. The spacing for the fixing washers should be set at 400-600mm centres.

Position the fixing washers along the edge and also down the centre line of each board. The fixing washers placed down the centre of the board should be staggered from the edge fixings, creating a crisscross pattern on the board surface.

Quantity: 50no. per pack

FLEXIBLE BUTYL TAPE

Suitable for:

Coated on one side with a non-woven fabric to ensure excellent adhesion to subsequent applications of waterproof membranes or adhesives.

Waterproof
Quick and easy to use
Excellent adhesion
Instant seal

Quantity: 5m and 20m rolls x 120mm

SUBSTRATE PREPARATION & REPAIR



PrimaDry is a premium semi-dry cementitious screed cement incorporating Larsen PrimaScreed additive. Due to the excellent early strengths and rapid drying properties, it is ideal for fast track construction and refurbishment projects.

PRIMA DRY

Coverage: 1.5m² per pack @50mm (when mixed with sand)
Bed depth: 25mm bonded - 250mm
Working time: 2-3 hours
Foot traffic: 12 hours
Floor covering: from 4 days

This advanced binder offers acceleration, water reduction and shrinkage compensation, to create a screed with high early and ultimate strengths, ease of finishing, rapid drying and reduced shrinkage. It can be used in bonded, unbonded or floating screed constructions and is suitable for most domestic and commercial applications, including housing developments, schools, shopping centres and hospitals.

CT C30 F6 EN 13813	>30 N/mm² COMPRESSIVE STRENGTH	SLUMP NON SLUMP
RAPID DRYING	PROTEIN FREE	



Quickset is a blend of specially selected aggregates, cements and additives to give a very fast setting cementitious patching screed mortar with high early strength.

QUICKSET

Coverage: 1.25m² per pack @10mm
Bed depth: 5mm-100mm
Working time: 20 mins
Foot traffic: 1-2 hours
Floor covering: 12-24 hours

Rapid repairs can be carried out on screeds, pavements and factory floors with minimal obstruction and downtime. Quickset can be used for other rapid setting applications, such as the bedding of manhole covers, etc. Quickset is chloride-free, sulphate resisting and non-corrosive to reinforcing steel, and generally does not require a bonding agent.

CT C40 F10 EN 13813	>40 N/mm² COMPRESSIVE STRENGTH
RAPID SET	PROTEIN FREE



Feather Edge is a quick drying, trowel applied smoothing compound. It is a blend of specially selected aggregates, cements and polymers to give a very fast setting, cementitious flooring skim coat.

FEATHER EDGE

Coverage: dependent on application
Bed depth: feather-3mm
Working time: 10-15 mins
Foot traffic: 1 hour
Floor covering: 1-2 hours

Feather Edge is ideal for the smoothing of small floor areas prior to the installation of resilient floor finishes (carpet and vinyl) rather than applying a self-levelling compound to the entire floor. It has a strong bond to concrete, plywood, existing self-levelling compounds, ceramic tiles, vinyl, etc. and is ideal for smoothing joints between different surfaces, covering tile grout joints, for use over vinyl tiles, etc.

>20 N/mm² COMPRESSIVE STRENGTH	SUPER FINE FINISH	FEATHER EDGE
RAPID SET	PROTEIN FREE	POLYMER MODIFIED




Rapid Patch is a slump free, polymer modified, mortar with exceptional strength characteristics, ideal for both internal and external application.

RAPID PATCH

Coverage: 1m² per pack @5mm
Bed depth: feather-25mm
Working time: 20 mins
Foot traffic: 1 hour
Floor covering: 2-4 hours

It is ideal for internal and external repairs to floors, stairs and steps, and for reconstruction of edges/corners on precast units. Rapid Patch is chloride-free, non-corrosive to reinforcing steel and generally does not require a bonding agent.

CT C30 F7 EN 13813	>30 N/mm² COMPRESSIVE STRENGTH	SLUMP NON SLUMP
RAPID SET	PROTEIN FREE	POLYMER MODIFIED
		INTERNAL & EXTERNAL



Whether it is the initial clean of a newly tiled surface, or the day-to-day maintenance of tiled flooring or walls, Larsen have the appropriate clean and care products to ensure a perfect finish. Whether it is removing residue from the initial grout stage, or keeping dirt and debris at bay, you can keep any tiled area looking as pristine as the day it was installed.

LARSEN

**MAINTAIN
AND
PROTECT**

TILE MAINTENANCE



Extra Strength Remover is a strong acidic cleaner for the removal of stubborn cement and grout residues.

Clean & Shine is a mild clean and shine product for the routine cleaning of tiled floors, offering superior cleaning action with a fresh scent, while improving surface colour.

Stone & Grout Protector is an advanced, water based surface protector based on fluoropolymers.

Impregnating Sealer is an advanced, solvent based surface protector and colour enhancer.

EXTRA STRENGTH REMOVER

Coverage: up to 100m² dependent upon dilution

It is ideal for removing residues caught in deep textured tiles. It is a strong acidic cleaner capable of removing cement stains. Ideal for stubborn residues.

CLEAN & SHINE

Coverage: up to 40m² dependent upon dilution

Renovating floor cleaner, ideal for maintaining polished floors. Offers superior cleaning action whilst enhancing surface colour and helps to maintain a polished look.

STONE & GROUT PROTECTOR

Coverage: up to 5-10m² dependent upon dilution

Unlike other products, the appearance of the impregnated surface remains almost totally unchanged. Stone & Grout Protector protects treated surfaces against water and oil based staining. Advanced stain resistant impregnating sealer offering invisible protection. It is suitable for almost all porous surfaces and all types of natural stone.

IMPREGNATING SEALER

Coverage: up to 2-10m² dependent upon dilution

It is ideal for providing a water repellent, stain resistant seal to slate and porous tiles, while improving and intensifying colour. Advanced impregnator for porous tiles that provides a water repellent seal and enhances the colour of the treated surface.



MAINTENANCE PRODUCT SELECTOR

	EXTRA STRENGTH REMOVER	CLEAN & SHINE	STONE & GROUT PROTECTOR	IMPREGNATING SEALER
Internal	✓ 1	✓	✓	✓ 1
External	✓	✗	✓	✓
Porcelain/Vitrified	✓	✓	✓ 3	✓ 3
Glazed Ceramic	✓	✓	✓ 3	✓ 3
Unglazed Ceramic	✓	✓	✓ 1	✓ 3
Quarry Tiles	✓	✓	✓ 3	✓ 3
Granite, Slate etc.	✓ 2	✓ 2	✓ 3	✓ 3
Marble, Travertine, Limestone etc.	✗	✓ 2	✓ 3	✓ 3
Sandstone	✓ 2	✓ 2	✓ 3	✓ 3
Grout	✓ 2	✓ 2	✓ 3	✓ 3
Concrete	✓ 2	✓ 2	✓ 3	✓ 3
REMOVE				
Grease, Wax, Polish				
Mild Cement Film	***			
Efflorescence	***			
Limescale	***			
Heavy Cement Residues	**			
Rust	**			
CLEAN				
Routine Cleaning		***		
Marble		*		
Polish Maintainer		***		
SEAL				
Water Based			✓	✓
Solvent Based				✓
Impregnating			✓	***
Water Repellent			***	*
Oil Repellent			***	**
Stain Guard			***	**
Colour Enhancing				
Invisible Protection			✓	

Performance Rating
n/a
* Suitable
** Good
*** Excellent

Note
1. Care should be taken when used indoors to ensure adequate ventilation and prevent vapour or splashes contacting sensitive surfaces.
2. Cement based materials and some natural stone is particularly sensitive to etching, always carry out a trial in an inconspicuous area using diluted product first.
3. Do not allow excess to dry on the surface.

PLEASE NOTE

The recommendations in this brochure are guidelines only and are based on both current development work and many years experience. Whilst every effort is made to ensure that the information is reliable we cannot accept responsibility for any work carried out with our materials where we have no control over methods of application, site conditions etc.

For full product information consult the relevant Product Data Sheet or if a detailed specification is required, please consult with our Technical Department.

*All curing times are approximate and are dependent on ambient temperatures, depth of substrate and site conditions.


LARSEN

**TECHNICAL
SUPPORT**



The key to a successful tiling installation is in the preparation, adhesive choice and giving the necessary consideration to movement of the substrate.

‘Fast-Track’ methods are now prevalent in our industry and with the advent of new adhesives, primers, levelling compounds and methods, there is a constant move to reduce installation times. However, we cannot highlight enough the importance of taking time at the early stages of an installation to ensure that the correct materials are being used on correctly prepared substrates in the correct manner. This time is always well spent and may be the difference between success and a costly failure. It doesn’t matter how quickly you tile it the first time, if you have to come back and do it again!

The following is a guide to recommended practices and information which is based on many years’ experience, current codes of practice and trade body recommendations. Following this guidance will minimise the occurrence of unnecessary common failures.

We would recommend that the current codes of practice and trade body recommendations and the relevant product datasheets are always consulted before undertaking any work.

Standards and guidance documents are always being reviewed and updated, so it is always worth checking for any current changes. A good example of this is the recent update to ‘BS5385-1 the Code of Practice for Wall Tiling’. There are a number of significant changes to the recommendations and what would be considered ‘good practice’.

TOP
TIP

BS 5385 Part 1: 2018 was published on 30 June and includes the following new requirements:

- **Tiling should be carried out by a skilled operative, who has been trained to a level of competence, certified by a recognised authoritative body, such as the TTA;**
- **Tiling direct to plywood is no longer recommended for wall tiling, but a bespoke tiling backer board should be used.**

These changes are coming in as part of the regular review of the Standard and are designed to reflect product changes and developments within the industry since the publication of BS 5385 Part 1: 2009.

There are numerous different types of tiles on the market. Depending on the type of tile, there are differences in porosity, density and durability of the tile and in the adhesive choice and handling.

Glazed Ceramic tiles consist of a porous bisque body with a decorative glazed surface. They can generally be fitted with any ready mixed adhesive on walls or any cement based adhesive on walls and floors

Stoneware (or Vitrified) tiles are usually unglazed and require the use of a polymer enhanced cement based adhesive for their installation.

Porcelain (or Fully Vitrified) can be glazed or unglazed, polished or textured and typically have a low water absorption and require the use of a polymer enhanced adhesive. It is not recommended to fix porcelain wall tiles with ready mixed adhesives.

Natural Stone offers the widest variety in performance and behaviour. Limestones, sandstones and some marbles can be soft and porous with light colours being almost translucent. Slates, granites and other marbles are quite dense. Tiles can be calibrated or uncalibrated and available in a variety of finishes – polished; honed; riven; flamed; tumbled; antiqued; brushed. They require the use of a polymer enhanced adhesive to ensure good bond strength and light colours require the use of a white adhesive with solid bed fixing to prevent shadowing of the adhesive showing through the tile. Natural stone tiles usually require sealing before and after grouting to protect from staining. Some thin or delicate natural stone tiles are resin backed for strength. This resin backing can be very difficult to bond to with cement based adhesive. Unless the supplier has recommended otherwise, it is advisable to use an epoxy adhesive to fit these types of tile.

Terrazzo tiles are manufactured from a blend of cement based binder and decorative aggregates which is subsequently polished after curing. Common in high traffic areas like supermarkets, these tiles are commonly laid by a traditional method bedding in a sand cement screed.

Agglomerated Stone or ‘Quartz’ tiles are typically comprised of decorative chips bound together by a resin binder. Advice for fixing should be sought from the manufacturer and the TTA guidance document consulted. Some agglomerated stone tiles are particularly sensitive to expansion with moisture and heat, leading to curling or lipping and may require the use of a resin adhesive.

Metal tiles can be either solid metal or thin sheet formed around a backer. Solid tiles should be fixed with Larsen Larfix E epoxy adhesive. For tiles formed around a backing block a flexible (S1) adhesive should be used. Care should be taken when grouting to prevent scratching.

Glass tiles can generally be treated in the same way as Porcelain. Extra care should be taken when grouting to prevent scratching.

Mosaics are small format tiles typically held in a pattern by a mesh backing or paper facing. They should be fixed according to the nature of tile used. Thin bed solid bed fixing is required.

Large Format tiles are described as tiles with at least one edge >600mm and an area of >1800cm² (e.g. 60 x 30cm), however tiles of over a 1m long are becoming more common.

The following are some of the issues with large format tiling:

- **Weight:** typically large format wall tiles will be thicker than standard format and will have correspondingly a greater weight per square metre. Careful consideration should therefore be paid to the background and its ability to support the weight of the installation. For this reason it is not recommended to fit large format wall tiles onto paint or existing tiles.
- **Safety:** Large format wall tiles should only be fixed by mechanical means when fitted above 3 metres.
- It is vitally important to check the flatness of the background or sub-floor before tiling begins to ensure that the tile can be solidly bedded. It may be necessary to apply a self-leveller to the floor first.
- When fixing tiles to floors a cement based tile adhesive meeting the requirements of category C2 is recommended. However, due to the significant reduction in grout joints as a percentage of the overall area, Large Format tiles experience much higher stresses than smaller tiles, particularly on heated screeds. Research has shown the use of a C2FS2 highly deformable adhesive greatly reduces the risk of failures. Consideration should be given

to using an adhesive with an extended opening time to allow longer time for adjustment of the tile.

- Solid bed fixing (including buttering the back of the tile) is recommended for fixing large format tiles. The use of an appropriate size of notched trowel is also essential, for example a 20mm Half-Round Notched Trowel.
- It is important to check the contact area regularly. A common fault occurs when the tile is well bedded around the perimeter but not in the centre, where there is only minimal contact between tile, adhesive and floor.
- The joint width for fixing large format tiles (including rectified tiles) should be no less than 3mm regardless of any instruction from the tile manufacturer. This applies to tiles of edge length up to 1.2m, tiles with a longer edge length should have the grout joint increased pro-rata.
- Movement joints are more critical with large format tiles and adequate consideration should be given even in domestic situations, particularly on heated screeds.
- Lipping of tiles and surface flatness of the finished tiling is much more noticeable and problematic with large format tiles. Proprietary systems are available to ensure tiling is level. Consideration of the lighting once the project has been completed is required. Down lighters, for example, may highlight even the most minor lip.



PRIMER CHOICE

Before tiling walls or floors many substrates need to be primed. It is important to realise that priming should never be used to make a poor substrate good for tiling nor should a good substrate be primed for the sake of it. A poor substrate should always be repaired or replaced before tiling.

Priming is carried out for three reasons:

- 1. Reduce absorption into the substrate, e.g. in the case of a porous screed
- 2. To improve the adhesive bond to a low porosity substrate e.g. in tile on tile applications
- 3. To create a barrier e.g. between cement based adhesives and gypsum substrates

Further guidance is given in the primer selection table on page 69.

ADHESIVE CHOICE

Adhesive choice is based on tile type, location of tiling and nature of substrate. Tile adhesives are classified according to the European Standard EN12004. Compliance with this standard, allows the product to be CE marked. In order to apply a CE mark to a tile adhesive the manufacturer must have had the adhesive tested by a Notified Body (an organisation designated by the national governments of the EU member states as being competent to make independent judgments about whether or not a product complies with the essential requirements laid down by each CE marking directive) and must run a Factory Production Control (FPC).

As well as introducing minimum performance requirements, EN12004 uses a simple performance related classification system to define products as follows:

- 1. **Types of Adhesives**
 - C Cement based Adhesives
 - D Dispersion (Ready mixed) Adhesives
 - R Reaction Resin Adhesives
- 2. **Classes of Adhesives**
 - 1 Normal Adhesive
 - 2 Improved Adhesive (*usually achieving higher bond strength*)
 - F Fast-Setting Adhesive (*must achieve >0.5MPa bond at 6 hours*)
 - T Adhesive with Reduced Slip
 - E Adhesive with Extended Open Time
 - S1 Deformable (Flexible) Adhesive
 - S2 Highly Deformable (Flexible) Adhesive

For example: C2TES1 is a deformable, standard setting, cement based, non-slip adhesive with extended open time.

Further guidance is given in the adhesive selection tables on page 67-68.

TROWEL CHOICE

It is important that the correct type of trowel is chosen to ensure the correct bed depth and adhesive coverage is achieved. There are many different sizes and shapes of notched trowel available. In general the smaller the notch size the thinner the resulting bed of adhesive. The smoother the substrate and tile the thinner the adhesive bed can be. It is important to ensure as near as possible to 100% coverage of adhesive is achieved, particularly with large format tiles and there are now specialist trowels available with notch patterns designed to ensure excellent coverage.

The following are some typical trowels and usage:

Trowel: 3mm square notch
Usage: Ready mix adhesive on walls with ceramic tiles

Trowel: 4 or 5mm square notch or V notch
Usage: Mosaic tiling

Trowel: 6 or 8mm square notch
Usage: Most general wall tiling

Trowel: 10, 12 or 15mm square or half round notch
Usage: Most general floor tiling

Trowel: 'Thick Bed, Solid Bed' or other specialist solid bed trowel
Usage: Large and very large format tiling

GROUT CHOICE

Grout choice is based on tile type, location of tiling, end use of the tiling installation and more often than not, colour.

The following are the descriptions of the product classifications according to current European Standard (EN13888). *It is not yet possible to CE mark tile grouts.*

Type	
CG1	Normal Cementitious
CG2W	Cementitious grout with improved water resistance
CG2A	Cementitious grout with improved abrasion resistance
CG2WA	Cementitious grout with improved water and abrasion resistance
RG	Reaction Resin Grout

Further guidance is given in the Grout selection table on page 69.



Before starting any tiling job take a few minutes to inspect the substrates. Look for levelness, cracks, construction joints. Scratch the surface to check for loose material or other contamination. Tap the substrate to check for hollows. Try wetting the surface with a little water to check for oils or other treatments which may affect adhesion. Highlight any issues or take corrective action before starting.

SUBSTRATE PREPARATION

In order to achieve a successful tiling installation, it is of paramount importance to ensure that the substrate is correctly prepared. The following are general guidelines which should always be followed; subsequent sections will give substrate specific information.

- The substrate must be sound and suitably dry.
- The substrate must be sufficiently strong, rigid and durable to support the tiling installation for the intended duty and traffic.
- The substrate must be free from dust, grease, loose materials and any other contaminant which may interfere with the bond.
- The substrate should be suitably level for the fixing method being used. This is particularly true when using ready mixed adhesives which have a maximum bed depth of 3mm.
- Priming may be required to improve the bond to some surfaces but should never be used to make good a poor substrate
- In wet areas some substrates require protection with a suitable tanking system.

FIXING

It is essential that the type of substrate and tile along with the installation are carefully considered when selecting the correct adhesive.

- Adhesives should be spread and evenly trowelled with a suitable notched trowel.
- Dot and Dab is not an acceptable method of fixing on walls or floors.
- Position the tile on the adhesive within the open time for the adhesive. Generally for fast setting (F) adhesives this is 10min; for standard setting this is 20min and for adhesives with extended open time (E) this is 30min.
- Press the tile gently but firmly with a slight twisting action. Larger tiles require greater force.
- In exterior, wet areas and on floors ensure 100% adhesive coverage of the tile without voids. With tiles with heavily textured backs or large format tiles, back buttering may be required.
- Ready mixed adhesive should only be used on walls and where thin bed application is appropriate (maximum bed depth of 3 mm)
- Where limited movement or vibration is expected, a deformable (S1) adhesive should be used.

GROUTING

When choosing a grout type, consideration should be given to joint width, tile type and requirements of the tiling installation. Before grouting commences, ensure that the adhesive is fully hardened – in general this is 24-48 hours for ready mixed adhesives, 18-24 hours for standard setting adhesives and 2-3 hours for fast setting adhesives*.

- Before starting, ensure that any adhesive in the joints is raked back to give an even joint depth.
- When mixing, always use the correct and consistent amount of water to reduce shade variation.
- Apply the grout to the joints with a grouting float, squeegee or sponge, ensuring that the joints are completely filled.
- Allow the grout to harden sufficiently, then clean off excess with a damp cloth or sponge working diagonally across the joints. Do not use excessive amounts of water as this can induce shading variations. Shade variations are greatly reduced with the use of Larsen Colourfast 360 Tile Grout.
- Where limited movement or vibration is expected, a flexible grout should be used.
- For ease of cleaning when using polymer modified and epoxy grouts, it is advisable to work on areas of 1m² as their improved performance also makes the hardened grout more difficult to clean from the tile face.

MOVEMENT JOINTS

Inadequate provision of movement is one of the most common causes of failure of tiled floor surfaces. Movement joints should be detailed by the architect or designer at the outset of the design. Due to the complexities of this subject please refer to the recommendations set out in BS5385. In general movement joints should be placed:

- Over existing construction
- At junctions between different substrates.
- On floors around the tiling perimeter.
- Where tiling butts another surface.
- On floors at 4.5-10m centres.
- On internal walls in large tiled areas, at internal vertical corners and at 3m to 4.5m centres horizontally and vertically.
- On exterior walls at external vertical angles, horizontally between floor levels and vertically at 3-4.5m centres.
- On external floor tiling, install intermediate movement joints at maximum 3 metre intervals
- Areas with large temperature variations such as heated screeds; sunrooms; externally (south facing) etc may require movement joints to be placed more frequently.
- Areas where stresses are likely to be concentrated, for example at changes of alignment.



**TOP
TIP**

Swirls in the ridges of spread adhesive can create air pockets and reduce adhesive coverage of the tile. Spreading the adhesive in straight lines allows the air to escape, improving coverage, particularly with large format tiles.



CRITICAL WEIGHTS FOR WALL TILING

While our adhesives are capable of bonding almost all tile types and sizes, consideration must be given to the substrate's ability to support the weight of the tiling (i.e. adhesive and tiles) without failure. The following are a list of common backgrounds and recommended maximum loadings.

Gypsum Plaster (Finish plaster)	20kg/m²
Plasterboard (direct to paper face – no skim)	32kg/m²
Tile backer board	Up to 50kg/m² refer to supplier's guidance, typically 40 - 60kg/m² depending on the type
Sand cement render	Up to 50kg/m² (very heavy tiles may require the use of reinforcement)

The critical factors to consider are the thickness of the tile and the type of tile – the facial dimension of the tile has no bearing on its weight per square metre. The following are some typical weights per square metre for tiles:

Glazed Ceramic (III)	6mm	10kg/m²
Glazed Ceramic (III)	10mm	17kg/m²
Porcelain (Ia)	10mm	23kg/m²
Porcelain (Ia)	12mm	28kg/m²
Natural Stone	7mm	19kg/m²
Natural Stone	10mm	27kg/m²
Natural Stone	20mm	55kg/m²

Further to the weight of tiles, the weight of adhesive must be added when considering substrate suitability. Typically allow ~5kg/m² for a 3mm solid bed of cement based adhesive and ~2.5kg/m² for a 2mm bed at 70% coverage for ready mixed adhesives.

COMMON SUBSTRATES ON WALLS

Sand Cement Render

- Sand and cement render is the preferred substrate for wall tiling.
- Concrete, brick and block walls must have been at least 4 weeks old prior to application of sand and cement render.
- Sand and cement render must be a further 4 weeks old before tiling.
- To reduce suction on porous surfaces, prime with Larsen Acrylic Primer diluted 1:1 with clean water.

Gypsum Plaster

- Must be 2 weeks old before tiling.
- Concrete, brick and block walls must have been at least 4 weeks old prior to application of plaster.
- Backing plasters such as Bonding or Browning are not suitable to directly receive tiling.
- Polished surfaces should be roughened with a stiff brush.
- Ensure weight of tiles and adhesive does not exceed 20kg/m².
- Cement based adhesives may only be used when the substrate is primed as follows: first coat Acrylic Primer diluted 1:1 with water and allowed to dry; second coat Acrylic Primer applied neat; apply tile adhesive while second coat is dry.
- In wet areas, Gypsum Plaster should be tanked.

Plasterboard

- Boards should generally be minimum 12.5mm and must be securely fixed and rigid.
- In intermittently damp areas moisture resistant boards should be used.
- In regularly wet areas e.g. shower enclosures, boards should be tanked.
- Ensure tiling installation does not exceed 32 kg/m².
- If plasterboard has been skimmed, it should be treated as gypsum plaster above.

Plywood

- The use of sheets or boards that are subject to movement from changes in moisture content should be avoided.
- Plywood and other wood based sheets or boards should be avoided for direct tiling.

Tile Backer Board

- Must be securely fixed in accordance with manufacturer's instructions.
- Unless otherwise stated by the manufacturer, no further treatment is required.
- Proprietary tile backer boards are available to provide a suitably rigid substrate to receive direct tiling and are available in a variety of materials and thicknesses, which should be selected for the relevant conditions.
- A tanking system might be required for boards used in wet areas, e.g. showers and wet rooms.
- Typical types of tile backer boards include:
 - a) foam-cored boards with glass fibre reinforced polymer modified cement coating or a covering of reinforced fleece webbing;
 - b) Glass Reinforced Cement Board (GRC) (a combination of cement and glass reinforcing fibres);
 - c) fibre-cement [Fibre Cement Board (FC), as defined in BS EN 12467, is a combination of cement and other reinforcing fibres]

Blockwork

- Must be 4 weeks old before tiling, free from dust and sufficiently level for fixing method being used.
- It is generally advisable for blockwork to be finished with sand cement render prior to tiling.
- Blockwork is particularly prone to drying shrinkage and care must be taken when blockwork is the main substrate.
- To reduce suction on porous surfaces, prime with Larsen Acrylic Primer diluted 1:1 with clean water.
- Lightweight blocks may require structural strengthening prior to tiling installation.

Concrete

- Must be approximately 6 weeks old before tiling.
- Ensure that concrete is free from mould oil residues or curing membranes and is sufficiently level for fixing method being used.
- To reduce suction on porous surfaces, prime with Larsen Acrylic Primer diluted 1:1 with clean water.
- If concrete is particularly smooth and dense prime with one coat of Larsen Primer Grip 360.

Paint

- Painted surfaces, in particular emulsion, can deteriorate rapidly when covered.
- Paint should be mechanically removed to reveal the original substrate.
- In general paint is designed to support its own weight, not the weight of tiling.

Existing Tiles

- Ensure existing tiling is sound and firmly bonded making good any defects.
- Ensure surface is free from grease and polishes.
- Prime with one coat of Larsen Primer Grip 360.
- Delay grouting until adhesive has fully dried.

Unsuitable Substrates

- Weak and friable surfaces
- Contaminated substrates
- Plastic sheet materials
- Wallpaper
- Hardboard
- MDF
- Plywood
- Bituminous materials
- Natural lime plaster.

TOP
TIP

Adhesive, grout and primer guides identifying all suitable products for each use are detailed at the end of the technical support section for ease of selection.



COMMON FLOOR SUBSTRATES

Concrete

- Must be approximately 6 weeks old before tiling.
- Ensure surface is free from curing membranes, sealers and other contaminants.
- Power floated concrete should be abraded and cleaned before priming with one coat of Larsen Primer Grip360.

Sand and Cement Screed

- Ensure the screed is sufficiently strong and stable for the installation.
- New screeds should be at least 3 weeks old before tiling.
- For 'Fast-Track' installations, specify the use of a Larsen PrimaDry rapid drying screed which can be tiled in 4 days.
- Porous screed should be primed with Larsen Acrylic Primer diluted 1:1 with clean water.

Cement Based Flowing Screeds

- Flowing screeds based on cement are relatively new to the market. As such, we would recommend contacting the producer for their guidance with regards to timing and preparation.
- While it is likely they will recommend that no surface preparation is required, it is always worth assessing the screed on site for suitability to receive tiling directly.
- All movement joints and crack inducer joints must be carried through the tiling.
- Priming is not generally required.

Green Screed

- Green screed is a sand cement screed which has not yet reached adequate maturity.
- It may not be sufficiently strong to receive tiling and will be prone to movement as a result of the loss of construction moisture.
- Anti-crack matting can be used to

decouple any stress as a result of moisture movement or cracking in the screed. This should be fixed with flexible rapid set tile adhesive using a 3-4mm notched trowel and thereafter a maximum of a 6mm flexible adhesive bed is applied over the mat to embed the tiles.

- Alternatively Larsen Professional Ultimate Flexible Rapid Set can be used to install tiles in as little as 4 days, provided the screed is sufficiently strong to resist damage.

Existing Tiles

- Remove and repair all damaged or hollow tiling.
- Ensure all polish, sealers and dirt have been removed.
- Prime surface with one coat of Larsen Primer Grip360.

Existing Vinyl Tiles

- Ensure that the vinyl tiles are securely bonded and in sound condition.
- Remove and repair all loose or damaged tiles.
- Ensure all polish, sealers and dirt have been removed.
- Prime surface with one coat of Larsen Primer Grip360.
- Cushioned vinyl is not a suitable substrate to receive tiling.

Asphalt

- It is imperative that the Asphalt is flooring grade and of sufficient structural integrity to support the tiling installation.
- The surface should be thoroughly cleaned and degreased.
- Improve the key on smooth asphalt with one coat of Larsen Primer Grip360.

Acoustic Matting

- Matting must be thin, firmly bonded and non-compressible.

- Matting should be installed as per the manufacturer's instructions.
- Tiles can be fitted using a suitable flexible (S1 or S2) adhesive.

Cracked Screed

- Nature and cause of crack should be determined.
- If deemed necessary structural repair should be carried out with, for example, resin injection.
- Anti-crack matting can then be used to decouple any residual stress in the substrate. This should be fixed with flexible rapid set tile adhesive using a 3-4mm notched trowel and thereafter a maximum of a 6mm flexible adhesive bed is applied over the mat to embed the tiles.

Unsuitable Substrates

- Weak and friable surfaces
- Contaminated substrates
- Flexible substrates
- Roofing grade asphalt
- Plastic sheet materials
- Cushioned vinyl
- Magnesite screeds
- Hardboard
- MDF
- Shuttering plywood
- Soft bituminous material
- Natural lime screeds



TIMBER FLOOR SUBSTRATES

At the time of printing, the following guidelines are still in line with the current code of practice. It is however thought that there is likely to be a similar change to the recommendations for suitable boards to receive tiling directly on floors as there has been on walls. As such, we continue to recommend that tiling directly on timber substrates should be avoided and where necessary a suitable tile backer board should be used instead.

Timber Floors - general

Timber sheets and boards are flexible, but tiles are not. Tiles are a rigid floor covering, therefore it is clear that a timber based substrate could cause a major problem. Where possible, tiling onto timber substrates should be avoided. Timber is prone to deflection and to minor lateral movement as a result of moisture and thermal changes. Any transverse deflection must be accounted for at the preparation stage and the use of a flexible adhesive will ensure both a strong bond to the timber and accommodate any minor movement. Ceramic Tiles should never be fixed to wooden substrates externally or in wet areas. Hardboard, OSB, shuttering plywood, MDF and moisture sensitive particle boards are not suitable to receive tiling directly.

Some timber boards may be treated with chemicals to improve the fire protection or water resistance, this can affect the adhesive bond strength. It is therefore recommended to carry out trials with the specific timber used on site.

Plywood should conform to BS EN 636 Class 3 (exterior grade) which supersedes the current requirements for WPB plywood.

Note: The use of a decoupling or anti-crack mat is advisable, particularly when installing Large Format or Natural Stone on timber substrates. However, it is important to realise that this will not be sufficient to strengthen a floor to prevent deflection, but will help to prevent lateral movement as a result of moisture and thermal changes being transmitted to the tile bed.

**TOP
TIP**

Two simple methods to check for excessive movement (bounce) in a timber floor. Hi-tech – Position a pendulum laser level on the middle of the floor away from joists and walk around it and the amount the beam bounces will indicate the movement in the floor. Lo-tech – Fill a glass of water to the brim and set it on the floor, walk around – if the water spills...



New Plywood Floors

- Ensure the floor has been designed to accommodate the tiling installation.
- Ensure adequate ventilation exists beneath the floor and that it is well supported.
- Ensure all new wood (including joists and noggins) is 'dry' and conditioned.
- The floor should be designed to accommodate both seasonal changes in moisture and the changes caused by step changes in heating.
- The floor should be sufficiently strong and rigid to support the tiling without excess deflection (particularly between the joists).
- All board edges must be supported underneath with noggins or joists in line with the joint.
- It is recommended to overlay the existing timber with minimum 15mm Class 3 Exterior Grade plywood, which has had edges and underside sealed or minimum 6mm suitable tile backer board, screw-fixed at 300mm centres. Boards should be laid 'broken bond' so the joints are staggered and do not align with the previous layer.
- In bathrooms, protect substrate with Larsen Waterproof Tanking Kit or Tanking Mat.
- Only use a flexible tile adhesive.

Other Existing Timber

- Ensure adequate ventilation exists beneath the floor.
- Chipboard is even more susceptible to moisture problems than plywood and generally a moisture resistant grade will be used. However, moisture resistant boards are often treated with chemicals or waxes which can prevent the adhesive bonding.
- Overlay the existing timber with minimum 15mm Class 3 Exterior Grade plywood, which has had edges and underside sealed or minimum 6mm tile backer board, screw-fixed at 300mm centres. Boards should be laid 'broken bond' so the joints are staggered and do not align

with the previous layer.

- In bathrooms, protect substrate with Larsen Waterproof Tanking Kit or Tanking Mat.
- Only use a flexible tile adhesive.

Direct to Tongue and Groove Floorboards

- Ensure adequate ventilation exists beneath the floor and that it is well supported.
- Contamination such as floor polish, wax and adhesive residues should be removed by sanding the boards, then vacuumed to remove any residue.
- Screw-fix the boards to joists at 300mm centres with 2 screws per board width.
- If insufficient support exists to allow this or if excess deflection is evident treat as for 'Other Existing Timber'.
- Use Professional Ultimate Flexible Rapid Set (S2).
- Ensure a solid bed of adhesive with a recommended 3mm bed depth.

Floating Floors

Where possible it is recommended to avoid direct fixing of ceramic tiles to floating timber floors and ceramic tiles should never be installed on to a floating timber floor in areas subject to heavy loadings either static or dynamic. In areas of light traffic the following guidelines may be followed with caution:

- Insulation must be of flooring grade and installed to provide minimum deflection under loading.
- The concrete subfloor must be free from ridges to prevent localised stresses on insulation layer.
- Generally speaking chipboard or similar products are used in the construction of floating floors, these should be of the moisture resistant type.
- The boards should be tongue and groove type with glued joints, cut edges must be supported underneath with noggins. Where a batten support exists, the

boards must be screwed to the supports at 300mm centres.

- The existing floating timber should then be overlaid with minimum 15mm Class 3 Exterior Grade plywood or minimum 6mm tile backer board, secured at maximum 300mm intervals using screws to the material beneath.
- Joints should be staggered with the floating timber joints. This process will help prevent individual movement of the boards and improve the overall rigidity of the floor.
- At this stage an assessment should be made as to the rigidity of the floor under expected loadings to ensure it is suitable for tiling.
- It is important that a deformable adhesive is used, either S1 or S2 grade.
- No voids should exist between the tile and substrate, minimum bed thickness 3mm.
- Do not butt-joint into corners or retaining walls, proprietary movement joints should be used. A minimum 15mm perimeter joint is recommended.



GYPSUM SCREED

Gypsum Screed - general.

Gypsum based screeds are based on a binder of calcium sulphate rather than cement. Generally they are pump applied 'Flowing Screeds' and there has been a growth in the popularity of their use when installing underfloor heating systems. The screeds can be based on Anhydrite or alpha-Hemihydrate forms of gypsum. While gypsum based screeds are suitable for tiling onto, there are a few extra critical points in their preparation.

For full details please refer to the Tile Association's guidance document "Tiling to Calcium Sulphate based Screeds".

Preparation

Moisture Content: The screed must be dry. Unlike cement based materials which can remain strong even when wet, gypsum based materials gain strength by a process of crystallization and so must be fully dry before covering. Moisture content should be checked with a carbide bomb moisture meter and a reading of less than 0.5% moisture indicates the screed is dry (Electronic meters are only indicative). The British Standard and TTA guidelines also recommend a relative humidity reading of less than 75%RH to be suitable. The moisture content level and test are critical, and should be carried out at several points. It is recommended that any heating system has been fully commissioned before carrying out moisture tests.

Surface Preparation: We recommend that **ALL** calcium sulphate based screeds are mechanically prepared before proceeding, e.g. by STR type machine and then brushing/ vacuuming to remove dust. For full details please refer to the Tile Association's guidance document "Tiling to Calcium Sulphate based Screeds".

Priming: Due to the risk of an adverse chemical reaction between the sulphate in the screed and cementitious materials, it is imperative that gypsum screeds are suitably sealed before over-coating with cement based materials e.g. tile adhesives. This is achieved as follows: first apply one coat Larsen Acrylic Primer diluted 1:1 with water and allowed to dry; second coat apply Larsen Acrylic Primer neat and allow to dry; check the floor to ensure it is fully sealed and if necessary apply a third neat coat; apply tile adhesive when the final coat has fully dried (changing from a 'milky' pink to a clear pink). Alternatively apply one uniform neat coat of Larsen Primer Grip 360 which should be allowed to dry. It is imperative that this coat is continuous and without pinholes.

Fixing method and materials

There are no specific requirements for the choice of adhesive or grout – this choice is based on normal factors: tile type; if the screed is heated; if a fast setting adhesive is required; etc.

Movement joints

Proprietary movement joints should be used. Movement joints should be provided in accordance with BS 5385 Part 1 and 2 and their location should be decided at design stage.

Generally, gypsum based screeds contain fewer movement joints than cement based screeds and often they may not suit the laying out of tiling joints. However, it may still be necessary to include movement joints in the tiling to accommodate stresses as a result of thermal or other movement. It is also necessary to separate areas which are on different heating circuits.

Movement accommodation is more critical on heated screeds and adequate consideration should be given even in domestic situations, particularly with large format tiles and in large open plan areas. Proprietary movement joints are recommended. The distance between movement joints in the floor covering should not exceed an edge length of 8m. The area should not be larger than 40m² with a length-to-width ratio of max. 2:1. When large format tiles are installed on heated screeds the distance between movement joints should be reduced to a maximum of 6m.

**TOP
TIP**

If the screed is heated, please also follow our recommendations for tiling onto heated screeds. Gypsum based screeds are generally not suitable for use externally or in areas of permanent dampness.



HEATED FLOOR SUBSTRATES

Heated Screed

- Before tiling, ensure the substrate is sufficiently cured and that the heating system has been tested for a minimum of 7 days.
- Check whether the screed is cement based, if not consult section on gypsum screeds.
- Consider using a decoupling or anti-crack mat over the whole floor area in order to decouple any thermal movement stress in the floor, particularly with large format tiles.
- Switch off the underfloor heating approx. 48hrs before tiling (or in cold conditions turn it down to give an average floor temperature of 15°C).
- Ensure tiles are suitable for use on heated screeds. Some resin agglomerate tiles are particular sensitive to variations in temperature.
- Install tiles as normal using a flexible adhesive, ensuring solid bed fixing.
- Movement accommodation is more critical on heated screeds. Adequate consideration should be given even in domestic situations. This is particularly the case with large format tiles and in large open plan areas. Proprietary movement joints are recommended. The distance between movement joints in the floor covering should not exceed an edge length of 8m. The area should not be larger than 40m² with a length-to-width ratio of max. 2 :1. When large format tiles are installed on heated screeds, the distance between movement joints should be reduced to a maximum of 6m.
- Do not butt-joint tiles into corners or walls.
- Allow a minimum of at least 7days after the work has been completed before turning the heating on and do so at the lowest setting. The temperature should be increased by no more than 5°C per 24hrs to minimise the risk of thermal shock.

Undertile Heating

- The substrate must be suitable to receive the tiling installation and stable to thermally induced movement.
- Where lightweight backer boards are used, they should be suitably fixed to the substrate with fixings and adhesive as recommended by the manufacturer.
- The electrical undertile heating mat should be installed as per the manufacturer's instructions.
- To prevent damage to the tiles a suitable levelling compound should be applied over the floor area, covering the cables by at least 3mm above any wires.
- Ensure tiles are suitable for use on heated floors. Some resin agglomerate tiles are particular sensitive to variations in temperature.
- Install tiles as normal using a flexible adhesive, ensuring solid bed fixing.
- Movement accommodation is more critical on heated floors and adequate consideration should be given even in domestic situations, particularly with large format tiles and in large open plan areas. Proprietary movement joints are recommended.
- Do not butt-joint tiles into corners or walls.
- Allow a minimum of at least 7days after the work has been completed before turning the heating on and do so at the lowest setting. The temperature increased by no more than 5°C per 24 hours to minimise the risk of thermal shock.

Different materials react differently to heat with some resin agglomerate tiles expanding three or four times as much as screed. Remember to always check the tile manufacturer's recommendations.

**TOP
TIP**





METAL

Tiling onto sheet metal should be carried out with care. While steel is inherently strong, it can be prone to vertical movement if not properly supported and horizontal expansion/contraction when subject to temperature fluctuation.

- The surface of the metal should be thoroughly cleaned and degreased to ensure it is free from all rust or other surface contamination.
- Galvanised steel, aluminium or painted metal are not considered suitable for tiling.
- The steel should be adequately supported and fixed to prevent deflection due to its own weight, the weight of tiling or any applied load during the life of the tiling installation and to prevent excessive expansion/contraction due to temperature change.
- A resin based adhesive should be used i.e. Larsen Epoxy Bond or Larfix E.
- Alternatively in small areas the prepared metal can be primed with Larsen Primer Grip 360 before tiling with Larsen Professional Ultimate Flexible Rapid Set.

BALCONIES

- The substrate must be suitable to receive the tiling installation and sloped to allow sufficient run-off to drains or guttering (approx 1.5mm/m).
- If the balcony is a flat roof conversion or similar non load-bearing design, consult a structural engineer for advice.
- Roofing Grade Asphalt or other roofing sheets or membranes are not suitable for tiling.
- It is recommended to use a proprietary balcony waterproof drainage system including the use of skirting tiles with proprietary waterproof trims, proprietary matting systems and drains.
- Install tiles as normal using a flexible S1 deformable adhesive.
- Ensure solid bed fixing.



Follow good tiling practice as set out in current standards and seek advice if unsure on installation.

EXTERNAL TILING / PAVING

The distinction between paving and tiling is a blurry one, particularly nowadays with the ubiquitous bi-fold doors leading to 'outside rooms' and the ever popular stone 'paved' kitchen floors. It is becoming commonplace to see large open plan kitchen living areas with internal finishes continuing out into a patio or garden. Recently the line is blurring even more with the growing trend of porcelain paving.

In essence, the differences between porcelain paving and porcelain tiling are similar to those between natural stone paving and tiling. While various British and European standards help to separate the technical differences and ensure minimum standards are achieved, effectively paving and tiling are very closely related. It is not so long ago that indoor tiling methods were effectively modifications of methods of installing outdoor paving. Some still try to make the distinction that when it is inside it is tiling and when it is outside it is paving, but there is often more to it than that.

When a floor is tiled, generally the substrate is stronger and more stable and the level of traffic is low to medium, so the 'tile' can be thinner, typically 10mm or less. When an area is paved there is an expectation that the substrate is perhaps less stable or the level of traffic is higher and heavy. So in paving the 'tile' is generally thicker, over 20mm depending on the material and the traffic. This is to ensure the 'tile' is strong enough to prevent breakage in use. If the 'tile' is sufficiently thick or strong i.e. porcelain or stone paving, then any of the following methods can be used. If it is thinner, i.e. porcelain or stone tiles, it should only be laid as tiling.

COMMON INSTALLATION METHODS

Flexible: Loose laid on a compacted sand or gravel bed, as is normal with concrete paving etc. Jointing is typically loose sand or gravel, stabilised or 'polymer sand' type.

Rigid: Laid on a mortar bed or BS7533 type fine bedding concrete on a solid base, in which case a priming slurry would ensure a bond between the porcelain unit and the bedding. Jointing is typically either rigid cement based grout or flexible 'polymer sand'.

Raised: On a suitable proprietary pedestal system.

Tiled: Laid with (minimum C2, preferably S1) tile adhesive on a fully cured, 'structural', frost resistant concrete slab. Jointing should be carried out with a suitable flexible tile grout.

With all methods when used externally it is important to consider water (rain) management, drainage and movement accommodation.

Movement is really only an issue where the 'tile' is bonded to the substrate and the joints are 'rigid'. Here, the major risk of movement comes from the differential thermal expansion and contraction of the tiles compared to the base. In this case the recommendations of TTA guidelines and BS5385 should be followed. The installed movement joints can simply be a suitable sealant or preferably a preformed movement joint. Further information on joints in this application is available in the standard and from the manufacturers of preformed joints, but the following would be general guidance for their location: Over existing construction movement joints; at junctions between different substrates; on floors around the tiling perimeter; where tiling butts another surface; externally on floors install intermediate movement joints at maximum 3 metre intervals.



DECOUPLING SYSTEM

We currently offer two decoupling systems: Duomat³⁶⁰ Anti-Crack and Decoupling System and WACM Waterproof Anti-Crack Membrane. Both are low profile membranes providing a decoupling system for floor tiling. Designed to accommodate and decouple lateral movement and stresses in substrates. Ideal for use with timber floors, natural stone, large format tiles, heated floors and cracked floors. When installed with our Self-Adhesive Tanking Tape, WACM also provides an impermeable waterproof barrier for tanking situations.

- Larsen WACM is designed to act as an uncoupling layer for problematic substrates; to bridge substrate cracking; to prevent the transfer of stresses or flex to the tiled surface; to act as a waterproofing/tanking layer.
- It will not strengthen substrates prone to deflection.

Preparation

- Ensure the floor is sufficiently level and load-bearing for the tiling installation and duty. It should be free from loose materials, grease, oil etc.



- Gypsum based substrates must have a moisture content of less than 0.5%. They must have been mechanically prepared and be primed as follows: first coat Acrylic Primer diluted 1:1 with water and allowed to dry; second coat Acrylic Primer applied neat.
- Timber based substrates should be conditioned and sufficiently dry. Existing timber sheet materials should be minimum 15mm flooring grade and screw-fixed at 300mm centres. Floorboards should be screw-fixed to joists at 300mm centres with 2 screws per board width. If insufficient support exists or the floor is subject to excessive deflection or spring, consideration should be given to strengthening the floor with suitable overlay.

Installation

- Roll out the membrane, measure and cut to size without overlap, allowing a 5-10mm expansion joint around the perimeter of the room. Roll sheet back up.
- Apply a flexible fast setting tile adhesive to the floor with a 3x3mm or 4x4mm notched trowel. Roll the membrane into the adhesive and smooth with a rubber float ensuring there are no air pockets within the adhesive open time. Butt joint adjoining sheets.
- Where Larsen WACM is used to provide a waterproof layer, joints should be taped with Larsen Self-Adhesive Tanking Tape. (Larsen Duomat³⁶⁰ cannot be used as a waterproof/tanking layer.)

Tiling

- The tiles can then be fitted as soon as the adhesive has set. It is recommended to use a flexible adhesive.
- Construction movement joints should be carried through the membrane and tiling installation. Sheets should be cut to permit this.
- Where required, ensure proprietary movement joints are used particularly in tanked installations.

Decoupling and anti-crack mats will help accommodate movement as a result of changes in temperature either from strong sunlight or underfloor heating.



TANKING

Two options are generally available for tanking - a Waterproof Tanking Kit comprising a water based liquid applied membrane, a self-adhesive flexible sealing strip and a bottle of primer or a low-profile Tanking Mat. Both systems are easy-to-apply and are ideal for use as secondary protection in ceramic tiling applications.

Waterproof Tanking Kit

- Ensure the substrate is suitable for the tiling to be applied.
- Ensure the substrate is of sufficient maturity, rigidity and stability.
- Ensure the substrate is smooth or only lightly textured (but not polished).
- Larsen Tanking Membrane should not be applied in wet conditions nor should it be applied if the ambient or substrate temperature is <7°C.
- Prime all surfaces with Larsen Acrylic Primer diluted 1:1 with clean water and allowed to dry.
- Apply self-adhesive sealing strip at joints; where fittings abut wall; and where floor abuts wall. Ensure an overlap of ~100mm where strips meet. Take care to smooth out any bubbles or creases, using a wallpaper seam roller or trowel.
- Apply a first coating of the liquid applied membrane to the entire surface by brush, roller or trowel including over the sealing strip.
- After the first coating has touch dried (normally within 1-2 hours), apply a second coating of membrane to full coverage of the area.
- Ensure a recommended thickness is achieved by applying the membrane at a rate of 1kg per m² (total of 2 coats).
- Allow the membrane to dry for at least 24 hours (longer in cool/damp conditions) before tiling.
- Fit tiles as normal with a polymer modified adhesive.

Waterproof Tanking Mat

- Ensure the substrate is suitable for the tiling to be applied.
- Ensure the substrate is of sufficient maturity, rigidity and stability.
- Ensure the substrate is smooth or only lightly textured (but not polished).
- Prime all surfaces with Larsen Acrylic Primer diluted 1:1 with clean water and allowed to dry.
- Roll out the Waterproof Tanking Mat, measure and cut to size without overlap. Roll sheet back up.
- Apply a flexible fast setting tile adhesive to the substrate with a 3x3mm or 4x4mm notched trowel. Roll the membrane into the adhesive. Smooth with a rubber float ensuring there are no air pockets within the adhesive open time. Butt joint adjoining sheets.
- Apply self-adhesive sealing strip at joints; where fittings abut wall; and where floor abuts wall.
- The tiles can then be fitted as soon as the adhesive has set.
- Construction movement joints should be carried through the tanking mat and tiling installation.
- Where required ensure proprietary movement joints are used particularly in tanked installations.

Take extra care that all joints and corners are properly taped without creases. This will ensure a watertight seal.



Tiling of swimming pools is, in general, no different to tiling any other wall/floor. The following are guidelines for the recommended products and methods to be used. No attempt is made to cover topics of waterproofing, tanking or design of structural elements of swimming pools.

For full information consult the Tile Association's paper 'Design and Construction Process for Swimming Pools'.

Preparation

- The pool shell shall be designed and installed to be capable of meeting the watertightness criteria in BS8007.
- New concrete should be at least 6 weeks old before tiling.
- If the pool shell is not suitable for direct tiling, the surface must be mechanically prepared to receive new screed/render and applied when the shell is at least 6 weeks old.
- This new screed/render should be at least 3 weeks old before tiling.
- It is important that these times are adhered to as much of the shrinkage of the structure will occur during this early period.
- Priming will not generally be required unless the surface is very porous or dusting.

Fixing

- Ensure the surface to be tiled is free of all contaminants including concrete release agents, curing compounds, laitance, etc., and there is a good mechanical key.
- Pressure washing or enclosed shot blasting may be required to remove contaminants.
- If priming is required use Larsen Acrylic Primer as directed.
- If there is a concern that the pool water will be such that it will be consistently aggressive to cement based materials, then contact our technical department regarding the use of a reaction resin adhesive.
- The tiles should be positioned with a firm twisting action within the open time of the adhesive.
- There should be 100% adhesive coverage of the tile without the presence of voids, this should be regularly checked throughout fixing, minimum bed thickness 3mm.

Grouting

- It is normally advisable to use Professional Epoxy Tile Grout to provide the necessary resistance to aggressive pool water, cleaning chemicals and for ease of cleaning.
- If the pool water is hard or calcium levels are >200mg/l as calcium carbonate and sulphate is <300mg/l as SO3, then Professional Colourfast Grout or Professional Stain Resistant Grout may be used depending on joint width.
- Consult product Technical Datasheets before use.

Movement Joints

- Proprietary movement joints should be used.
- Movement joints should be provided in accordance with BS 5385 Part 1:20 or BS 5385 Part 2:20 and their location should be decided at design stage.
- Either epoxy based sealants or unplasticised polysulphide sealants are suitable for use in swimming pools and surrounds.

Commissioning

- The swimming pool should only be filled 3-4 weeks after grouting has been completed.
- It should be filled at a rate of not more than 750mm rise in 24hrs.
- Subsequently the temperature should be raised at no more than 0.25°C per 24hrs.



It is not just the swimming pool itself which needs care and attention at the design stage. The deck around the swimming pool, the area just above the waterline and the changing areas can all be considered aggressive conditions. Changing areas and the pool surround will usually be cleaned daily with aggressive chemicals and often with power hoses. Areas in direct contact with lapping water will be prone to erosion and possible chemical attack depending on the water quality. The entire hall housing the pool will be at a constantly high humidity and mild temperature increasing the risk of mould growth. In all of these areas careful consideration should be given to the choice of adhesive and grout. In almost all these situations it would be prudent to use Larsen Professional Epoxy Tile Grout.

TOP
TIP

SETTING AND DRYING

Powder tile adhesives and grouts are cement based. Cement is a hydraulic binder which means that there is a chemical reaction between the cement and water. Setting times of cement-based tile adhesives are affected by temperature as this affects the speed of this chemical reaction. When the temperature is high the reaction will be much quicker, particularly with fast setting adhesives, and when it is low the reaction will be much slower. Below 5°C the reaction can stop altogether which is one of the reasons adhesives should never be used below 5°C.

Ready-mixed tile adhesives on the other hand are composed of organic polymer binders which set and gain bond strength as the adhesive loses water, much in the same way as an emulsion paint dries and hardens. As such the setting times of ready-mixed tile adhesives are greatly increased by anything which slows this loss of moisture, i.e., low temperature, heavy bed depth, low porosity tile and/or substrate. The adhesive is at its weakest after sufficient drying has taken place to remove the initial wet grab but before the adhesive has sufficiently dried to provide significant bond strength. This period is lengthened with heavy beds, larger format tiles and cold site conditions.



GROUTING ISSUES

Grout is an intrinsic part of any tiling installation and while proprietary grouts can be as durable and hard wearing as the tiles, often grouting gives the most problems. More often than not, all of the following common grout problems can be overcome by taking a few simple steps:

Cracking: The two main causes of grout cracking are movement in the substrate (in which case it is possible that the tiles have also debonded) or use of a narrow joint grout in too wide a joint width.

Colour Shading: This is the most obvious grout issue and is usually a result of water. Too much or inconsistent amounts of mixing water (common when mixing part bags by eye) or too much water used in the clean up (particularly when cleaning early) lead to variation in the surface strength of the grout and pigment wash out which lead to colour variations. Generally the more water the lighter the colour. The reverse is also true, so areas where the water is absorbed away or evaporates off rapidly (e.g. in direct sunlight) tend to be darker. Larsen Professional Colourfast is designed to minimise grout shading issues.

Weak or dusty surface: Again too much water is the issue resulting in a weak layer on the surface where the cement has effectively been washed out. A white powder on the surface is usually a result of efflorescence which is common in all cementitious materials (particularly when excess water is used, in cold or damp site conditions). Efflorescence can be removed with a mild acid based cleaner.

When colour is critical, it is recommended to grout test panels on site with all materials to be used to get a true representation. When grouting large areas always ensure the grout is from the same batch and if not preblend the different batches before mixing. It is always worth remembering that light coloured grouts on floors are difficult to keep looking clean.

Levelling Systems: As a general rule we do not endorse the use of proprietary tile levelling systems. Where they are used, they must not be used as an alternative to good practice or the proper bedding of tiles into the adhesive bed. Also, they should only ever be used to compensate for minor level differences or lippage to a maximum of 1mm and where the adhesive bed is solid and sufficient to accommodate this without disruption and within the open time of the adhesive.

All drying times are based on ideal drying conditions. Low temperatures and high humidity will slow setting and drying time.

TOP
TIP

POLYMER

The addition of polymers to cement based tile adhesive greatly improves their performance. The polymers improve durability, water resistance and deformability of the adhesive and allow bonding to low porosity surfaces such as porcelain tiles. While it is possible to add a liquid additive, most modern adhesives use redispersible polymer powders premixed in the formulation. The use of premixed polymer-modified adhesives ensures consistent polymer content and should always be specified in preference of site mixing using a flexible admixture.

MOVEMENT

Movement is one of the biggest causes of tiling failures. Tiles are rigid and brittle and therefore not ideally suited for dealing with movement. The use of flexible tile adhesives can go some way to reduce the transmission of stresses from the substrate to the tiles but ultimately if the movement (and therefore force) is great enough something will give. Thin, less strong tiles may crack and thicker, stronger tiles are likely to debond. It is therefore best to address sources of movement before tiling. The following are the most common:

Drying shrinkage: All cement based materials (blocks, concrete, screed etc) will shrink as they cure and dry out. The movement generated by this shrinkage can develop very high shear stresses in a 'rigid' tiling installation. These stresses can develop to the point where the force generated is greater than the bond strength allowing the tile to be 'blown' off the wall. As such, great care should always be given to ensure recommended drying times are adhered to and consideration to adequate provision of sufficient movement joints.

Thermal movement (internal): heated screeds can induce differential expansion in the substrate, tile bed and tiles, particularly if heating is increased rapidly. The use of a 'flexible' adhesive and a controlled ramping of the heat and the inclusion of sufficient movement joints are generally sufficient to prevent failure.

Thermal movement (external): Dark tiles will warm and cool quickly especially in South/West facing installations. In these cases a flexible adhesive should be used with solid bed fixing in order to accommodate the risk of thermal shock.

Deflection and moisture movement: Timber floors are inherently flexible and can suffer from excess deflection and swelling/contraction with moisture variation. As such great care is required when tiling onto timber substrates and specific guidelines should be followed.



TILE ADHESIVE

PROFESSIONAL RANGE

Pg 67
Delete entire line under substrate wall – Fiberglass



	ULTIMATE FLEXIBLE RAPID SET	FLEXIBLE RAPID SET+	FIBERFLEX™ SEMI-RAPID SET+	FLEXIBLE STANDARD SET+	RAPID SET FLEX	STANDARD SET FLEX
PERFORMANCE						
BS EN 12004 Type	C2F S2	C2F S1	C2TE S1	C2TE S1	C2FT	C2TE
Bed depth	3 - 12mm	3 - 20mm	3 - 20mm	3 - 20mm	3 - 12mm	3 - 12mm
Potlife	60 mins	45 mins	2 hours	5 hours	45 mins	5 hours
Open time	10 mins	10 mins	30 mins	30 mins	10 mins	30 mins
Grout after	3 hrs	3 hrs	6 hrs	18 hrs	3 hrs	24 hrs
Colour	Grey / White	Grey / White	Grey / White	Grey / White	Grey / White	White
USE: LOCATION						
Wall	✓	✓	✓	✓	✓	✓
Floor	✓	✓	✓	✓	✓	✓
Dry internal	✓	✓	✓	✓	✓	✓
Intermittently wet	✓	✓	✓	✓	✓	✓
Prolonged wet	✓	✓	✓	✓	✓	✓
Swimming pool	✓	✓	✓	✓	✓	✓
External	✓	✓	✓	✓	✓	✓
USE: TILE TYPE						
Ceramic	✓	✓	✓	✓	✓	✓
Porcelain	✓	✓	✓	✓	✓	✓
Marble & natural stone	✓	✓	✓	✓	✓	✓
Mosaics	✓	✓	✓	✓	✓	✓
Large format	✓	✓	✓	✓	✓	✓
SUBSTRATE: WALL						
Gypsum plaster	✓ P	✓ P	✓ P	✓ P	✓ P	✓ P
Plasterboard	✓	✓	✓	✓	✓	✓
Render	✓	✓	✓	✓	✓	✓
Blockwork	✓	✓	✓	✓	✓	✓
Existing tiles	✓ NP	✓ NP	✓ NP	✓ NP	✓ NP	✓ NP
Concrete	✓	✓	✓	✓	✓	✓
Plywood	Timber boards and plywood are no longer recommended as a suitable substrate to receive tiling directly					
Tile backer board	✓ P	✓ P	✓ P	✓ P	✓ P	✓ P
SUBSTRATE: FLOOR						
Concrete	✓	✓	✓	✓	✓	✓
Cement screed	✓	✓	✓	✓	✓	✓
Gypsum screed	✓ P	✓ P	✓ P	✓ P	✓ P	✓ P
Green screed	✓	✓ F	✓ F	✓ F		
Plywood	✓	✓	✓	✓	✓	✓
Tile backer board	✓ P	✓ P	✓ P	✓ P	✓ P	✓ P
Tongue & groove	✓	✓ F	✓ F	✓ F		
Underfloor heating	✓	✓	✓	✓	✓	✓
Existing tiles	✓ NP	✓ NP	✓ NP	✓ NP	✓ NP	✓ NP
Vinyl tiles	✓ NP	✓ NP	✓ NP	✓ NP	✓ NP	✓ NP
Steel	✓ NP	✓ NP	✓ NP	✓ NP		
Flooring grade asphalt	✓ NP	✓ NP	✓ NP	✓ NP	✓ NP	✓ NP

✓ Recommended application	✓ Suitable with some limitations	P Prime first	NP Prime with NP Keycoat or Primer Grip 360	F Requires the addition of Flexibiliser
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Potlife: The maximum time interval during which the adhesive can be used after mixing.
Open Time: The maximum interval after application at which tiles can be embedded in the applied adhesive and meet the specified adhesive strength requirement.



FAST SET FLEX SEMI-FAST SET FLEX FAST SET STANDARD SET FLEX SHOWER PROOF PROFESSIONAL SHOWER PROOF TRADE

PERFORMANCE	C2FT	C2TE S1	C1F	C2TE	D1T	D1T
BS EN 12004 Type	C2FT	C2TE S1	C1F	C2TE	D1T	D1T
Bed depth	3 - 12mm	12mm	3 - 12mm	3 - 12mm	1 - 3mm	1 - 3mm
Potlife	45 mins	120 mins	45 mins	5 hours	n/a	n/a
Open time	10 mins	30 mins	10 mins	30 mins	20 mins	20 mins
Grout after	3 hrs	6 hrs	3 hrs	24 hrs	24 hrs	24 hrs
Colour	Grey / White	Grey / White	Grey	White	White	White
USE: LOCATION						
Wall	✓	✓	✓	✓	✓	✓
Floor	✓	✓	✓	✓		✓
Dry internal	✓	✓	✓	✓	✓	✓
Intermittently wet	✓	✓	✓	✓	✓	✓
Prolonged wet	✓	✓	✓	✓		
Swimming pool	✓	✓	✓	✓		
External	✓	✓	✓	✓		
USE: TILE TYPE						
Ceramic	✓	✓	✓	✓	✓	✓
Porcelain	✓	✓	✓	✓		
Marble & natural stone	✓	✓	✓	✓		
Mosaics	✓	✓	✓	✓	✓	✓
Large format	✓	✓	✓	✓		
SUBSTRATE: WALL						
Gypsum plaster	✓ P	✓ P	✓ P	✓ P	✓	✓
Plasterboard	✓	✓	✓	✓	✓	✓
Render	✓	✓	✓	✓	✓	✓
Blockwork	✓	✓	✓	✓		
Existing tiles	✓ NP	✓ NP	✓ NP	✓ NP		
Concrete	✓	✓	✓	✓		
Plywood	Timber boards and plywood are no longer recommended as a suitable substrate to receive tiling directly					
Tile backer board	✓ P	✓ P	✓ P	✓ P	✓	✓
SUBSTRATE: FLOOR						
Concrete	✓	✓	✓	✓		
Cement screed	✓	✓	✓	✓		
Gypsum screed	✓ P	✓ P	✓ P	✓ P		
Green screed						
Plywood	✓	✓	✓ F	✓		
Tile backer board	✓ P	✓ P	✓ P	✓ P		
Tongue & groove						
Underfloor heating	✓	✓	✓ F	✓		
Existing tiles	✓ NP	✓ NP	✓ NP	✓ NP		
Vinyl tiles	✓ NP	✓ NP	✓ F NP	✓ NP		
Steel						
Flooring grade asphalt	✓ NP	✓ NP	✓ F NP	✓ NP		

✓ Recommended application	✓ Suitable with some limitations	P Prime first	NP Prime with NP Keycoat or Primer Grip 360	F Requires the addition of Flexibiliser
---------------------------	----------------------------------	---------------	---------------------------------------------	-----------------------------------------

Potlife: The maximum time interval during which the adhesive can be used after mixing.
Open Time: The maximum interval after application at which tiles can be embedded in the applied adhesive and meet the specified adhesive strength requirement.



COLOUR FAST 360° STAIN RESISTANT NARROW JOINT STAIN RESISTANT WIDE JOINT EPOXY GROUT FLEXIBLE FLOOR GROUT FLOOR GROUT WALL GROUT

Joint Width in mm	1-15	Up-4	2-20	3-20	3-20	3-12	Up-3
Classification	13888 CG2WA	13888 CG2W	13888 CG2W	13888 RG	13888 CG2W	13888 CG1	13888 CG1
APPLICATION							
Fast Set	✓						
Anti-efflorescence	✓			✓			
Dry Interior	✓	✓	✓	✓	✓	✓	✓
Bathrooms	✓	✓	✓	✓	✓	✓	✓
Domestic showers	✓	✓	✓	✓	✓	✓	✓
Power showers	✓	✓	✓	✓	✓	*	
Kitchen	✓	✓	✓	✓	✓	✓	✓
Underfloor/tile heating	✓	✓	✓	✓	✓	*	
Exterior	✓	✓	✓	✓	✓	✓	
Swimming pool	✓ **	✓ **	✓ **	✓	✓ **	✓ **	✓ **
Minor movement areas	✓	✓	✓	✓	✓	*	
Heavy trafficked areas	✓	✓	✓	✓	✓	*	
Hygienic/Sterile areas				✓			
Exposure to chemicals				✓			
Abrasion resistant	✓			✓			

* Possible with the use of diluted Larcem Flexibiliser as the guaging liquid. ** Consult TTA guide "Design & Construction Process for Swimming Pools" to ensure suitability of cement based grouts. Available in a selection of colours.

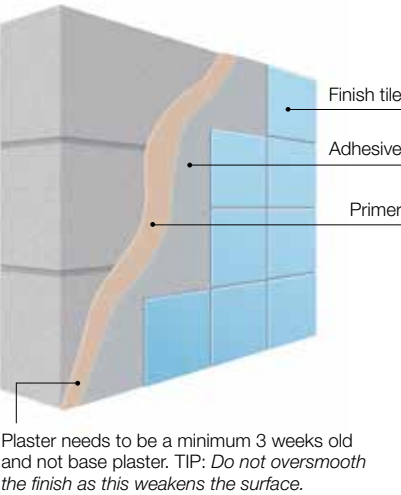
PRIMERS

APPLICATION	RECOMMENDATION - GENERAL	RECOMMENDATION - ALTERNATIVE
Gypsum Plaster	Acrylic Primer: 1 coat diluted 1:1 with water followed by 1 coat neat	1 coat neat Primer Grip 360
Plasterboard	Priming generally not essential	1 coat neat Primer Grip 360 (particularly with Moisture Resistant Boards)
Sand Cement Render	Priming generally not essential	Very absorbent surfaces. Acrylic Primer: 1 coat diluted 1:1 with water
Existing Tiles	1 coat neat Primer Grip 360	Slurry coat: 3 parts adhesive:1 part Acrylic Primer
Tile Backer Cement Board	Priming generally not essential	Very absorbent surfaces - Acrylic Primer – 1 coat diluted 1:1 with water
Magnesium Silicate Boards	Acrylic Primer – 1 coat diluted 1:1 with water followed by 1 coat neat	1 coat neat Primer Grip 360
Sand Cement Screed	Priming generally not essential	Very absorbent surfaces: Acrylic Primer – 1 coat diluted 1:1 with water
Concrete	Priming generally not essential	Very absorbent surfaces: Acrylic Primer – 1 coat diluted 1:1 with water
Levelling Compound	Priming generally not essential	Very absorbent surfaces: Acrylic Primer – 1 coat diluted 1:1 with water
Powerfloated Concrete	1 coat neat Primer Grip 360	Enclosed shot blast followed by Acrylic Primer – 1 coat diluted 1:1 with water
Calcium Sulphate Screed	Acrylic Primer: 1 coat diluted 1:1 with water followed by 1 coat neat (subsequent coats may be required to ensure substrate is sealed)	1 coat neat Primer Grip 360
Wood sheets and boards	Priming generally not essential	1 coat neat Primer Grip 360 (particularly with Moisture Resistant Boards)
Epoxy DPM	1 coat neat Primer Grip 360	Second coat of DPM with Sand Scatter
Existing Vinyl Tiles	1 coat neat Primer Grip 360	Slurry Coat – 3 parts Adhesive:1 part Acrylic Primer
Flooring Grade Asphalt	1 coat neat Primer Grip 360	Slurry Coat – 3 parts Adhesive:1 part Acrylic Primer
Metal	1 coat neat Primer Grip 360	Larprime EU with Sand Scatter
Heavy Traffic Areas	1 coat neat Primer Grip3 60	Larprime EU with Sand Scatter

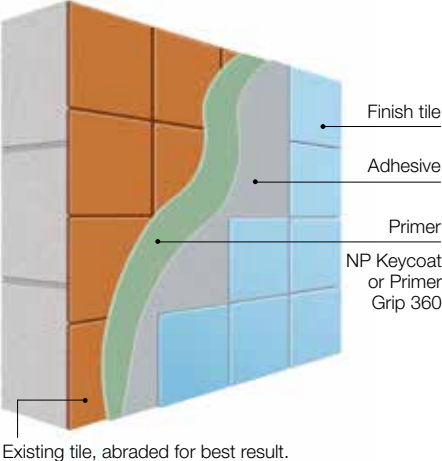
Note: In all instances, NP Keycoat may be used instead of Primer Grip360.

WALL
TILING

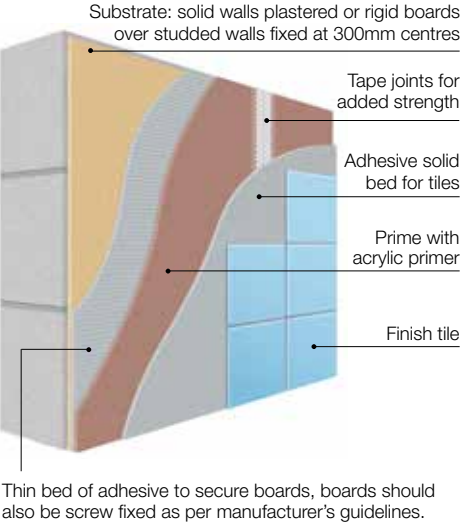
TILING TO GYPSUM PLASTER
TO INCLUDE OVER PLASTERBOARD,
CONCRETE OR BLOCKWORK



TILE ON TILE
ALL TILES
INCLUDING PORCELAIN

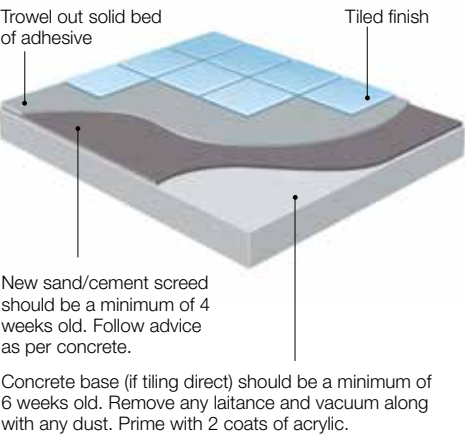


TILING ONTO
BACKER BOARDS

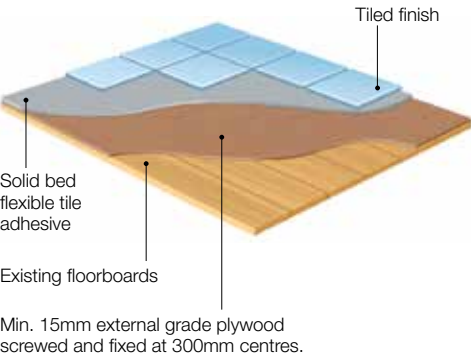


FLOOR
TILING

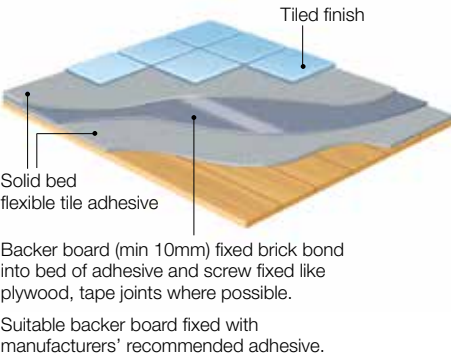
TILING TO CONCRETE
OR SAND CEMENT SCREEDS



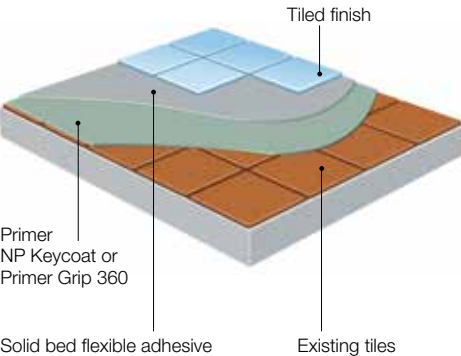
TILING TO PLYWOOD OVERLAY
FLOORS OR TIMBER FLOORS
TO INCLUDE WEYROC STYLE FLOORS



TILING TO BACKER
BOARD FLOORS

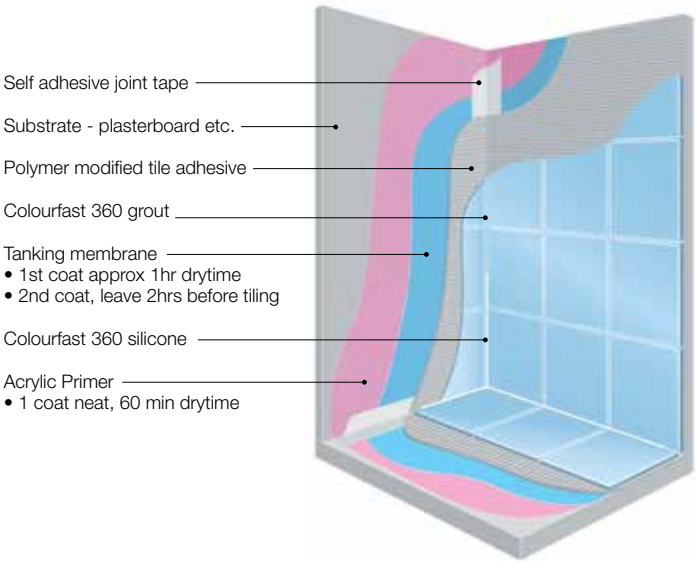


TILING TO EXISTING TILES
TO INCLUDE QUARRY TILES
AND TERRAZZO

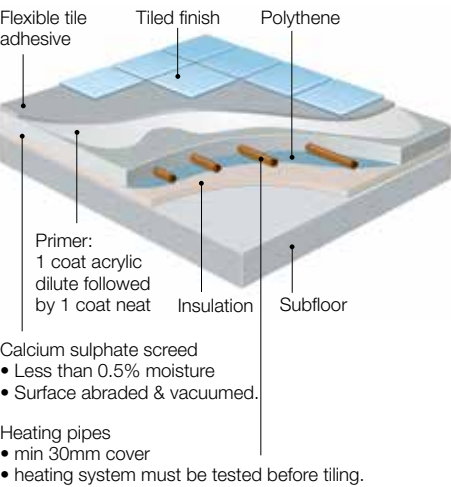


OTHER
APPLICATIONS

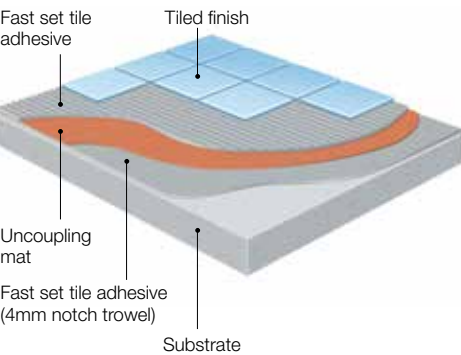
TANKING KIT



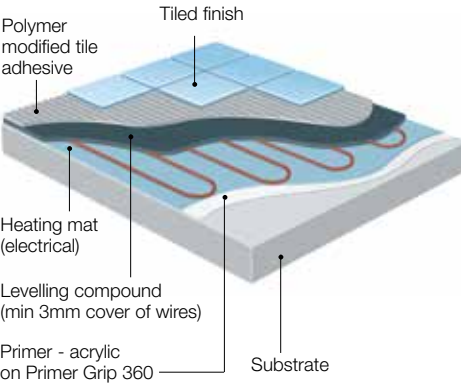
ANHYDRITE SCREEDS



UNCOUPLING MEMBRANE



UNDERFLOOR HEATING





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