TILE ADHESIVES & GROUTS

PRODUCT RANGE & INSTALLATION GUIDES

ULTRA TILEFIX

DISCOVER ULTRA TILEFIX

UltraTileFix quality products deliver the performance your business needs - every time, backed by an award-winning personal service, a tried and trusted reputation and the support of a British company built on expertise.

Instarmac has been manufacturing in the Midlands since 1977. We are a privately owned business offering financial stability and trading security. Our working culture, engagement techniques and strong employer values have earned Times Top 100 places and A Great Place to Work recognition. Instarmac supply the tiling market with a comprehensive range of adhesives, grouts, silicones, primers, levelling compounds and tanking kit with over 2 million units sold annually.

Committed to Quality, Committed to Service, Committed to You

OUR PROMISE

COMMITTED TO QUALITY

We are committed to providing quality products, our founder Charlie Hudson's philosophy, "Product performance is key, it is this that people remember long after price has been forgotten", drives our organisation.

We maintain an automated manufacturing facility specifically designed for our needs, and which utilises the latest technology ensuring consistent and reliable product production. An ISO approved process of testing in-house and through certified external bodies offers the reassurance of a quality guarantee and secures worldwide recognised product performance.

What's more, investing in our research and development laboratory has allowed us to be innovative and continuously explore changing market demands, new emerging technologies, alternative materials and environmental impacts. Our product range evolves to meet your needs without any compromise to its quality.

COMMITTED TO SERVICE

We are committed to providing service time and time again which exceeds your expectations. Our team of fully trained staff are just a phone call away to provide all the technical and practical support about the products needed to complete a successful tiling contract. We utilise the latest technology helping to ensure a seamless ordering process, including automatic order confirmations.

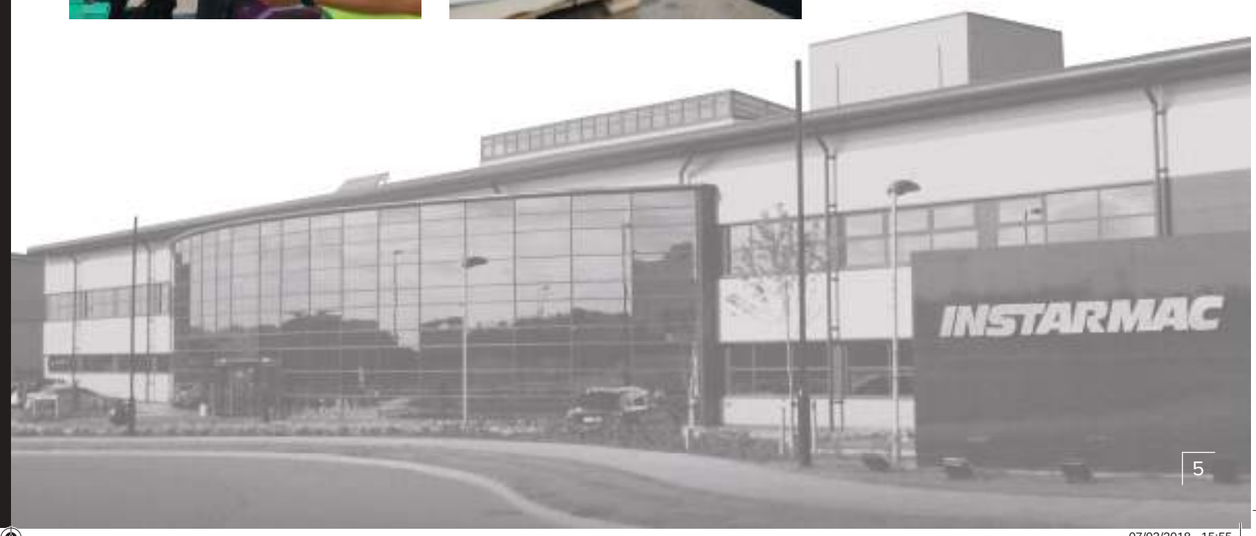
We pride ourselves on offering a second-to-none delivery service, paralleled with a commitment to protecting vulnerable road users. Our privately owned FORS Silver accredited fleet of 37 vehicles is managed and fully tracked in-house. Getting product on our customers' shelves or to site is key. By operating a fleet with employed drivers, live tracking technology, text notification software and tail lifts on all vehicles you will experience first-class service, accurate deliveries and reduced damages.

COMMITTED TO YOU

You can trust us to be by your side and fully committed to you. Our aim is to provide the correct quality products, efficiently without complications every time you place an order. We will always be on hand whenever you need support and are happy to conduct free bespoke training or site visits on your behalf. Marketing materials in the form of collateral and POS are readily available when required. By understanding your business needs a successful partnership will be forged.

We continue to implement our comprehensive environmental initiatives as laid out in our ISO 14001 action plan, and often re-evaluate our position with a truly sustainable future in mind for our business and yours.

Our loyal customer base and extensive back catalogue of project successes demonstrate our trusted reputation. Using UltraTileFix as your preferred supplier will help establish a secure and long-term future for your business.



WALL
ADHESIVES

READY MIXED PASTES

ProSuper Grip

High Grab Acrylic Wall Tile Adhesive

Size: 15kg

Pallet Quantity: 56

Colour: Off-white

CE

- Ideal for ceramic tiles and porcelain or natural stone mosaics
- Exceptional grip
- Shower proof
- Covers up to 6m²

ProSuper White

Highly Flexible Acrylic Wall Tile Adhesive

Size: 7.5kg & 15kg

Pallet Quantity: 100 & 56

Colour: Brilliant White

CE

- Ideal for ceramic tiles and porcelain or natural stone mosaics
- Water resistant for showers and wetrooms
- Ideal for white grout projects
- Covers up to 6m²

WALL & FLOOR
ADHESIVES

CEMENTITIOUS POWDERS

ProSet SS

Standard Set
Tile Adhesive

Size: 20kg

Pallet Quantity: 54

Colours: White & Grey

CE

- Ideal for use with ceramic and porcelain tiles
- Non-slip

3-12mm bed thickness | 2 hrs pot life | 16 hrs set time | conforms to C2 TE EN 12004 classification | LIFETIME GUARANTEE

ProRapid RS

Flexible Rapid Set
Tile Adhesive

Size: 20kg

Pallet Quantity: 54

Colours: White & Grey

CE

- Ideal for use with porcelain, mosaic and natural stone tiles
- Flexible properties for use in wet areas and with underfloor heating

3-16mm bed thickness | 60 min pot life | 2.5 hrs set time | conforms to C2 FT EN 12004 classification | LIFETIME GUARANTEE

ProFlex SPES

Standard Set Flexible
Tile Adhesive

Size: 20kg

Pallet Quantity: 54

Colours: White & Grey

CE

- Ideal for use with porcelain, mosaic, natural stone and glass tiles
- Extended open time
- S1 flexibility for timber floors, swimming pools and underfloor heating systems

3-20mm bed thickness | 2 hrs pot life | 16 hrs set time | conforms to C2TE S1 EN 12004 classification | LIFETIME GUARANTEE

ProFlex CSA

Flexible Tile Adhesive for
Anhydrite Floors & Plaster Walls

Size: 20kg

Pallet Quantity: 54

Colour: Beige

- Ideal for use with porcelain, mosaic and natural stone tiles
- CSA class formulated for calcium sulphate screeds
- Flexible properties for use with underfloor heating

3-10mm bed thickness | 60 min pot life | 2 hrs set time | equivalent to C2FT S1 classification | LIFETIME GUARANTEE

ProRapid PB

Rapid Set
Tile Adhesive

Size: 20kg

Pallet Quantity: 54

Colour: Grey

CE

- Ideal for use with ceramic, mosaic and natural stone tiles
- Fast setting

3-12mm bed thickness | 60 min pot life | 2 hrs set time | conforms to C1 FT EN 12004 classification | LIFETIME GUARANTEE

ProFlex SP

Rapid Set Flexible
Tile Adhesive

Size: 20kg

Pallet Quantity: 54

Colours: White & Grey

CE

- Ideal for use with porcelain, mosaic, natural stone and glass tiles
- S1 flexibility for timber floors, swimming pools and underfloor heating systems

3-20mm bed thickness | 60 min pot life | 2.5 hrs set time | conforms to C2FT S1 EN 12004 classification | LIFETIME GUARANTEE

ProFlex S2

Fibre Reinforced
Flexible Tile Adhesive

Size: 20kg

Pallet Quantity: 54

Colours: White & Grey

CE

- Ideal for use with all tile types including brick slips, resin backed and quartz
- Formulated with Fibre Bond technology
- Ultimate S2 flexibility for timber floors including plywood and chipboard overlays, swimming pools and underfloor heating systems

3-20mm bed thickness | 60 min pot life | 3.5 hrs set time | conforms to C2F S2 EN 12004 classification | LIFETIME GUARANTEE

Fibre Bond

Formulated with added fibre particles for superior non-slip properties and thixotropic behaviour.

CSA

A Calcium Sulphate Aluminate based adhesive for compatibility with calcium sulphate screeds.

TILE ADHESIVE

PRODUCT SELECTOR

	PRODUCT FEATURES	 ProSuper Grip	 ProSuper White
		High Grab Acrylic Wall Tile Adhesive	Highly Flexible Acrylic Wall Tile Adhesive
SPECIFICATION	Wall & Floor	Wall	Wall
	Bed Thickness	1-3mm	1-3mm
	Open Time*	30 Minutes	30 Minutes
	Pot Life*	N/A	N/A
	Set Time*	N/A	N/A
	Grout After*	18 Hours	18 Hours
	Conforms to	EN12004 D1 TE	EN12004 D2 TE
	Colour	Off-white	Brilliant White
	Pack Size	15kg	7.5kg & 15kg
	Pallet Quantity	56	100 & 56
KEY AREAS OF USE	General Wall Installations	✓	✓
	General Floor Installations	✗	✗
	Interior Installations	✓	✓
	Exterior Installations	✗	✗
	Wet Rooms	✗	✓
	Domestic Showers with Tray	✓	✓
	Communal Showers	✗	✓
	Swimming Pools	✗	✗
	Electric Matting Underfloor Heating	✗	✗
	Piped Water Underfloor Heating	✗	✗
	Conservatories	✓	✓
SUITABLE TILES	Ceramic	✓	✓
	Porcelain	✓***	✓***
	Glass	✗	✗
	Mosaics	✓	✓
	Marble	✓***	✓***
	Travertine	✓	✓
	Granite	✓***	✓***
	Limestone	✓	✓
	Terracotta	✓***	✓***
	Quarry	✓***	✓***
	Slate	✓***	✓***
	Resin Backed	✗	✗
	Quartz	✗	✗
	Brick Slips	✗	✗
SUITABLE SURFACES & SUBSTRATES	Concrete	✓	✓
	Sand/cement Screed	✗	✗
	Plywood Overlay (15mm min)	✗	✗
	Tile Backer Boards	✓	✓
	Cement Faced Fibre Boards	✓	✓
	Anhydrite/Calcium Sulphate/Gypsum Based Screeds	✗	✗
	Tile on Tile**	✓	✓
	Firm & Stable Plaster	✓	✓
	Plasterboard	✓	✓
	Sand/cement Render	✓	✓
	Concrete Brick/Block	✓	✓
	Hard Vinyl Tiles	✗	✗
	Flooring Grade Asphalt	✗	✗

* Depending on temperatures, substrates and site conditions.

** Existing ceramic, porcelain and natural stone tiles (overlay) known as “Tile on Tile”.

*** With ready mixed tile adhesives it is important to ensure that at least one of the surfaces is porous to allow drying of the adhesive. When using non-porous tiles like porcelain and glass, drying times will be substantially increased. In these instances we would recommend the use of a cementitious adhesive.

D Prime first with UltraTileFix ProPrimer diluted as per installation guides.

N Prime first with UltraTileFix ProPrimer neat as per installation guides.

Suitable = ✓ Not suitable = ✗

For full application instructions, please refer to the relevant product’s datasheet or call the **UltraTileFix Technical Department 01827 254402**.

CEMENTITIOUS WALL & FLOOR TILE ADHESIVES

 ProSet SS	 ProRapid PB	 ProRapid RS	 ProFlex SP	 ProFlex SPES	 ProFlex S2	 ProFlex CSA
Standard Set Tile Adhesive	Rapid Set Tile Adhesive	Flexible Rapid Set Tile Adhesive	Rapid Set Flexible Tile Adhesive	Standard Set Flexible Tile Adhesive	Fibre Reinforced Flexible Tile Adhesive	Flexible Tile Adhesive for Anhydrite Floors & Plaster Walls
Wall & Floor	Wall & Floor	Wall & Floor	Wall & Floor	Wall & Floor	Wall & Floor	Wall & Floor
3-12mm	3-12mm	3-16mm	3-20mm	3-20mm	3-20mm	3-10mm
30 Minutes+	20-30 Minutes	20-30 Minutes	20-30 Minutes	30 Minutes+	20-30 Minutes	20-30 Minutes
2 Hours	60 Minutes	60 Minutes	60 Minutes	2 Hours	60 Minutes	60 Minutes
16 Hours	2 Hours	2.5 Hours	2.5 Hours	16 Hours	3.5 Hours	3 Hours
18 Hours	3 Hours	4 Hours	4 Hours	18 Hours	4 Hours	4 Hours
EN12004 C2 TE	EN12004 C1 FT	EN12004 C2 FT	EN12004 C2FT EN12002 S1	EN12004 C2TE EN12002 S1	EN12004 C2F EN12002 S2	Equivalent to C2FT S1
White & Grey	Grey	White & Grey	White & Grey	White & Grey	White & Grey	Beige
20kg	20kg	20kg	20kg	20kg	20kg	20kg
54	54	54	54	54	54	54
✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✗
✗	✗	✓	✓	✓	✓	✗
✗	✗	✓	✓	✓	✓	✗
✗	✗	✓	✓	✓	✓	✗
✗	✗	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓
✓	✗	✓	✓	✓	✓	✓
✗	✗	✗	✓	✓	✓	✗
✗	✓	✓	✓	✓	✓	✓
✗	✓	✓	✓	✓	✓	✓
✗	✓	✓	✓	✓	✓	✓
✗	✓	✓	✓	✓	✓	✓
✗	✓	✓	✓	✓	✓	✓
✗	✓	✓	✓	✓	✓	✓
✗	✗	✗	✗	✗	✓	✓
✗	✗	✗	✓	✓	✓	✗
✗	✗	✗	✓	✓	✓	✗
✓ D	✓ D	✓ D	✓ D	✓ D	✓ D	✗
✓ D	✓ D	✓ D	✓ D	✓ D	✓ D	✗
✗	✗	✓ D	✓ D	✓ D	✓ D	✗
✗	✗	✓ D	✓ D	✓ D	✓ D	✗
✗	✗	✓ D	✓ D	✓ D	✓ D	✗
✗	✗	✓ D	✓ D	✓ D	✓ D	✓ D
✗	✗	✓ N	✓ N	✓ N	✓ N	✗
✓ D	✓ D	✓ D	✓ D	✓ D	✓ D	✓ D
✓ D	✓ D	✓ D	✓ D	✓ D	✓ D	✓ D
✓ D	✓ D	✓ D	✓ D	✓ D	✓ D	✗
✓ D	✓ D	✓ D	✓ D	✓ D	✓ D	✗
✗	✗	✗	✓ N	✓ N	✓ N	✗
✗	✗	✗	✓ N	✓ N	✓ N	✗

GROUTS & SILICONES

Colour Shield

A specialist additive for lasting colour protection.

Colour Guard

All materials are assessed to ensure stability against UV degradation.

ProGrout Smooth

Sizes: 3kg & 10kg

Pallet Quantity: Denominations of 4

Colour: White

CE

- Ideal for use with ceramic, porcelain and natural stone tiles
- Value grout, ideal for large non-flexible areas
- Quick to mix with an easy trowel formulation
- Wash down with minimal effort

ProGrout Flexible

Sizes: 3kg & 10kg

Pallet Quantity: Denominations of 4

Colours: White, Cream, Bahama Beige, Jasmine, Limestone, Taupe, Brown, Silver Grey, Mid-Grey, Grey, Charcoal & Black

CE

- Designed for use with all tile types
- Colour Shield technology for vibrant durable finishes
- Ideal for wetrooms, swimming pools and underfloor heating systems
- Wash down with minimal effort

ProSealer

Size: 310ml

Pallet Quantity: Boxes of 12

Colours: Clear, White, Cream, Jasmine, Limestone, Taupe, Silver Grey, Mid-Grey, Grey, Charcoal & Black

CE

- Neutral cure product
- Low odour, no slump formulation
- Enhanced bond and elasticity
- Ideal for all kitchen and bathroom applications
- Colour match finishing for tiling installations
- Resistant to UV due to Colour Guard technology

Both grout products are packaged using the latest plastic packaging technology, offering greater product protection and prolonged freshness.

	PRODUCT FEATURES	ProGrout Smooth	ProGrout Flexible	ProSealer
		GROUTS	GROUTS	SILICONE
SPECIFICATION	Wall & Floor	Wall & Floor	Wall & Floor	Wall & Floor
	Joint Thickness	1-12mm	1-20mm	Typically 6mm Diameter Bead
	Pot Life*	30-60 Minutes	30-60 Minutes	10 Minutes Open Time
	Hard Set*	12 Hours	12 Hours	24 Hours at 3mm Set Time
	Conforms to	EN13888 CG2	EN13888 CG2 WA	ISO 846 & 11600 25LM
	Pack Size	3kg & 10kg	3kg & 10kg	310ml
	Pallet Quantity	Denominations of 4	Denominations of 4	Boxes of 12
KEY AREAS OF USE	General Wall Installations	✓	✓	✓
	General Floor Installations	✓	✓	✓
	Interior Installations	✓	✓	✓
	Exterior Installations	✓	✓	✓
	Wet Rooms	✗	✓	✓
	Domestic Showers with Tray	✗	✓	✓
	Communal Showers	✗	✓	✓
	Swimming Pools	✗	✓	✓
	Electric Matting Underfloor Heating	✗	✓	✓
	Piped Water Underfloor Heating	✗	✓	✓
	Conservatories	✓	✓	✓
SUITABLE TILES	Ceramic	✓	✓	✓
	Porcelain	✓	✓	✓
	Glass	✗	✓	✓
	Mosaics	✗	✓	✓
	Marble	✓	✓	✓**
	Travertine	✓	✓	✓**
	Granite	✓	✓	✓**
	Limestone	✓	✓	✓**
	Terracotta	✓	✓	✓
	Quarry	✓	✓	✓
	Slate	✓	✓	✓**
	Resin Backed	✗	✓	✓
	Quartz	✗	✓	✓
	Brick Slips	✗	✓	✓

* Depending on temperatures, substrates and site conditions. ** When using with natural stone tiles, please try an inconspicuous area first to ensure suitable before use. Suitable = ✓ Not suitable = ✗

GROUT COLOURS

White, Cream, Bahama Beige, Jasmine

Limestone, Taupe, Brown, Silver Grey

Mid-Grey, Grey, Charcoal, Black

SILICONE COLOURS

Clear, White, Cream, Jasmine

Limestone, Taupe, Silver Grey, Mid-Grey

Grey, Charcoal, Black

Colours depicted in the charts (above) should be used as a guide only, as print process shades may vary from samples. We would always recommend that a small trial area be completed to check for the desired shade as applications can vary depending upon substrate and site conditions.

TILING ANCILLARIES

ProPrimer

Advanced Polymer Primer for Exceptional Bond and Multiple Substrates

Size: 1L & 5L

Box Quantity: 10 & 4

- Can be used on walls and floors
- Designed for both porous and non-porous substrates
- Enhances adhesion and reduces substrate porosity
- Suitable for calcium sulphate screeds

Coverage Guide	
1:1 Dilution	14-20m^2
3:1 Dilution	28-40m^2
Neat	5-10m^2

ProShield

Tanking Kit

Size: 8kg (includes flexible waterproof coating and membrane tape)

Pallet Quantity: 48

- A flexible waterproof and crack bridging coating system
- Easy to use components and no priming required
- Provides complete protection from moisture
- For use on all water sensitive backgrounds
- Designed for wetrooms, showers, bathrooms and kitchens
- Suitable for underfloor heating
- 8m^2 coverage per unit
- Tape available to buy separately

Mixing Bucket

25L Mixing Bucket

- Transparent
- Complete with litre scale
- Metal handle

Please refer to page 26 for guidance on substrate preparation.

LEVELLING
COMPOUNDS

ProLevel One

Deep Fill Floor Leveller

Size: 20kg

Pallet Quantity: 54

CE

- Internal use
- Formulated for applications up to 60mm
- Flexible properties for use with warm water underfloor heating

ProLevel Two

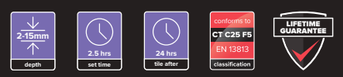
Flexible Two Part Floor Leveller

Size: 20kg & 4L

Pallet Quantity: 48

CE

- Internal use
- Convenient to mix
- Moisture tolerant
- Excellent flexibility for timber floors and underfloor heating systems



ProLevel Fibre

Reinforced Flexible Floor Leveller

Size: 20kg

Pallet Quantity: 54

CE

- Internal use
- Formulated with **Fibre Bond** technology
- Excellent flexibility for timber floors and underfloor heating systems

ProLevel Rapid

Fibre Reinforced Flexible Floor Leveller

Size: 20kg

Pallet Quantity: 54

CE

- Internal use
- Ideal for fast track projects with same day tiling
- Formulated with **Fibre Bond** technology
- Exceptional flexibility for timber floors and underfloor heating systems

CONTRACT FLOORING SOLUTIONS

PRODUCT SELECTOR

* Based on 3mm application and depending on substrate porosity, nature of flooring and good site drying conditions.

** Coverage details should be used as a guide but may vary depending on substrate and site conditions. DPM coverage and consumption based on application to clean smooth surfaces at 20°C. These may vary depending on temperature and surface evenness.

*** Priming not required, if Level IT Bond is applied within 12 hours of DPM application. If after 12 hours, it is recommend to prime using UltraTileFix ProPrimer neat.

D Prime first with UltraTileFix ProPrimer diluted as per installation guides.

N Prime first with UltraTileFix ProPrimer neat as per installation guides.

For full application instructions, please refer to the relevant product's datasheet or call the **UltraTileFix Technical Department 01827 254402**.

		LEVELLING COMPOUNDS				
		 ProLevel One	 ProLevel Two	 ProLevel Fibre	 ProLevel Rapid	 Level IT Super 30
	PRODUCT FEATURES	Deep Fill Floor Leveller	Flexible Two Part Floor Leveller	Reinforced Flexible Floor Leveller	Fibre Reinforced Flexible Floor Leveller	Rapid Setting, Rapid Drying Smoothing Underlayment
SPECIFICATION	Working Time at 20°C	20-30 Minutes*	20-30 Minutes*	20-30 Minutes*	10-15 Minutes*	10 Minutes*
	Set Time at 20°C	3 Hours*	2.5 Hours*	3 Hours*	30 Minutes*	30 Minutes*
	Commence the Tiling Process	8 Hours *	24 Hours *	8 Hours*	45 Minutes* (natural stone & ceramic tiles)	3 Hours*
	Application Thickness	3-60mm	2-15mm	3-75mm	2-15mm	2-15mm
	Protein Free	Yes	Yes	Yes	Yes	Yes
	Coverage**	Approx. 4m² at 3mm	Approx. 6m² at 2mm	Approx. 4m² at 3mm	Approx. 5m² at 3mm	Approx. 6m² at 2mm
	Suitable for Pump Action	Yes	No	Yes	No	No
	Compressive Strength (minimum) 28 Days to BS EN 13892-2	38.0 N/mm²	25.84 N/mm²	38.0 N/mm²	35.0 N/mm²	35.0 N/mm²
	Flexural Strength (minimum) 28 Days to BS EN 13892-2	8.50 N/mm²	5.82 N/mm²	8.50 N/mm²	7.0 N/mm²	7.0 N/mm²
	Pack Size	20kg	20kg & 4L	20kg	20kg	20kg & 4L
	Pallet Quantity	54	48	54	54	48
SUITABLE SURFACES & SUBSTRATES	Concrete Subfloors	✓ **D**	✓**D**	✓ **D**	✓ **D**	✓**D**
	Tamped or Pan Floated Concrete	✓ **N**	✓ **N**	✓ **N**	✓ **N**	✓ **N**
	Sand/Cement Screeds	✓ **D**	✓ **D**	✓ **D**	✓ **D**	✓ **D**
	Existing Smoothing Underlayments	✓ **D**	✓ **D**	✓ **D**	✓ **D**	✓ **D**
	Terrazzo/Granolithic/Ceramic Tiles	✓**N**	✓ **N**	✓ **N**	✓**N**	✓ **N**
	Anhydrite/Calcium Sulphate/Gypsum Based Screeds	✓**D** ✆	✓ **D** ✆	✓ **D** ✆	✓ **D** ✆	✓**D** ✆
	Plywood/Tile Backer Board	✓**D** ✆	✓**D** ✆	✓ **D** ✆	✓ **D** ✆	✓ **D** ✆
	Warm Water Underfloor Heating	✓Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37	✓Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37
	Radiant Electrical Underfloor Heating System	✗	✓ Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37
	Vinyl Tiles	✗	✓ **N**	✗	✓ **N**	✓ **N**
	UltraFloor DPM IT	✓ **N**	✓ **N**	✓ **N**	✓ **N**	✓ **N**
	Pre-smoothing prior to DPM or MVS	✗	✓ **D**	✗	✗	✗
	Old Adhesive Residues	✗	✗	✗	✗	✗

Suitable = ✓ Not suitable = ✗

		LEVELLING COMPOUNDS			REPAIR & FINISHING COMPOUNDS			MOISTURE PROTECTION	
		 Level IT Bond	 Level IT Super Flex 30	 Level IT Smooth	 Patch IT	 Feather IT	 Fill IT	 DPM IT	 Suppress IT
	PRODUCT FEATURES	Rapid Drying, All Purpose Smoothing Underlayment	Rapid Setting & Rapid Drying Fibre Reinforced, Flexible Smoothing Finishing Compound	High Performance, Fine Flow Smoothing Underlayment	Rapid Drying Repair Mortar	Rapid Drying Finishing Compound	Rapid Setting & Drying Flowable Bulking Concrete	Rapid Curing Primer Membrane	Single Component, Two-coat Moisture Vapour Suppressant
SPECIFICATION	Working Time at 20°C	15-20 Minutes*	10 Minutes*	20-30 Minutes*	10-15 Minutes	10-20 Minutes	5-10 Minutes	45-75 Minutes Pot Life	N/A
	Set Time at 20°C	2 Hours*	30 Minutes*	2-3 Hours*	30 Minutes	30 Minutes*	30 Minutes	16 Hours	2 Hours
	Commence the Tiling Process	4 Hours*	1 Hour*	12 Hours*	90 Minutes	4 Hours*	1 Hour	N/A	N/A
	Application Thickness	2-12mm	2-10mm	2-30mm	20mm	Feather Edge to 3mm	30-300mm	2.75m²/kg at 345 Microns	N/A
	Protein Free	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A
	Coverage**	Approx. 5m² at 3mm	Approx. 6.5m² at 2mm	Approx. 6.6m² at 2mm	6.5m² at 1mm / 3.2m² at 2mm	6m² at 1mm	2.5 x 25kg bags covers approx. 1m² at 30mm depth	Power Floated Concrete 13.75m² (98%RH) 15m² (90%RH) Cementitious Screed 9m² (98%RH) 12m² (90%RH)	Approx. 16.5m² (based on two coats)
	Suitable for Pump Action	No	No	Yes	N/A	N/A	N/A	N/A	N/A
	Compressive Strength (minimum) 28 Days to BS EN 13892-2	20.0 N/mm²	32.45 N/mm²	35.0 N/mm²	40.0 N/mm²	7.0 N/mm²	45.0 N/mm²	N/A	N/A
	Flexural Strength (minimum) 28 Days to BS EN 13892-2	5.0 N/mm²	7.68 N/mm²	6.0 N/mm²	4.5 N/mm²	3.0 N/mm²	5.0 N/mm²	N/A	N/A
	Pack Size	20kg & 4.2L	20kg & 5.0L	20kg	10kg	5kg	25kg	5kg	5L
	Pallet Quantity	48	48	48	48	100	56	80	4 per box
SUITABLE SURFACES & SUBSTRATES	Concrete Subfloors	✓ **D**	✓ **D**	✓ **D**	✓	✓	✓	✓	✓
	Tamped or Pan Floated Concrete	✓ **N**	✓ **N**	✓**N**	✓ **N**	✗	✓ **N**	✗	✗
	Sand/Cement Screeds	✓ **D**	✓ **D**	✓ **D**	✓	✓	✓	✓	✓
	Existing Smoothing Underlayments	✓ **D**	✓**D**	✓ **D**	✓	✓	✓	✓	✓
	Terrazzo/Granolithic/Ceramic Tiles	✓ **N**	✓ **N**	✓**N**	✓ **N**	✗	✗	✗	✗
	Anhydrite/Calcium Sulphate/Gypsum Based Screeds	✓ **D** ✆	✓ **D** ✆	✓ **D** ✆	✓ **D** ✆	✗	✗	✗	✗
	Plywood/Tile Backer Board	✓ **D** ✆	✓**D** ✆	✓**D** ✆	✓ **D** ✆	✗	✗	✗	✗
	Warm Water Underfloor Heating	✓Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37	✗	✗	✗	✗	✗
	Radiant Electrical Underfloor Heating System	✓ Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37	✓ Refer to pages 35, 36 & 37	✗	✗	✗	✗	✗
	Vinyl Tiles	✓**N**	✓ **N**	✗	✗	✗	✗	✗	✗
	UltraFloor DPM IT	✓***	✓ **N**	✓ **N**	✓ **N**	✗	✗	N/A	N/A
	Pre-smoothing prior to DPM or MVS	✓	✗	✗	✗	✗	✓	N/A	N/A
	Old Adhesive Residues	✓	✗	✗	✗	✗	✗	✗	✗

Suitable = ✓ Not suitable = ✗

INSTALLATION GUIDES

CONTENTS

SECTION	PAGE
CLASSIFICATIONS	20
MATERIAL CALCULATIONS	21
COMMON TERMS	22
TILE TYPES	24
SUBSTRATE PREPARATION	26
WALL TILING	28
FLOOR TILING	31
TILING ONTO CALCIUM SULPHATE SCREEDS	34
TILING ONTO FLOORS WITH UNDERFLOOR HEATING	35
TILING ONTO FLOORS USING AN UNCOUPLING SYSTEM	38
MOVEMENT JOINTS IN A TILING INSTALLATION	39
USING A DAMP PROOF MEMBRANE	40
WATERPROOF/TANKING SYSTEM	41
TILING SWIMMING POOLS/PERMANENTLY WET AREAS	41
FLOWABLE PAVING GROUT	42

Tile Adhesives & Grout Classifications

All UltraTileFix adhesives and grouts are fully CE classified, their 'Declaration of Performance' certificates can be downloaded at the click of a button from ultratilefix.co.uk.

The European Standards explained:

EN 12004:2007

Adhesives for tiles - requirements, evaluation of conformity, classification and designation regarding ceramic tile adhesives for internal and external tile installations for floors and walls.

C Cementitious adhesive

D Dispersion adhesive (ready mixed paste)

Tile Adhesive Classes

1 Normal adhesive

2 Improved adhesive (meets the requirements for additional characteristics)

F Fast setting adhesive (cementitious only) that achieves 0.5 N/mm² in 6 hours

T Non-slip adhesive (for walls)

E Extended open time adhesive, i.e. >30 minutes (for cementitious and dispersion adhesives only)

EN 12002:2008

Determination of the transverse deformation for cementitious adhesives and grout.

S1 Deformable adhesive with a transverse deformation of between 2.5mm and 5mm

S2 Highly deformable adhesive with a transverse deformation of over 5mm

EN 13888:2009

Grouts for tiles - definitions and specifications for ceramic tile grouts for internal and external tile installations for walls and floors.

CG1 Normal cementitious grouts with fundamental characteristics such as abrasion resistance, flexural and compressive strengths when subjected to dry storage/freeze-thaw cycles as well as water absorption measured over time.

CG2 Improved cementitious grout, typically highly polymer modified cementitious grouts with additional characteristics such as reduced water absorption and higher abrasion resistance.

CG2 WA Improved cementitious grout (CG2) with additional characteristics of reduced water absorption (W) and high abrasion resistance (A).

MATERIAL CALCULATIONS

How much material will I need?

Working out how much material you will need for a tiling installation has never been so easy! **Visit ultratilefix.co.uk and use our online product calculator or download the Instarmac Product Planner App.**

Ready Mixed Tile Adhesive (Paste)

1 x 15kg plastic bucket, when using a recommended 3mm notched trowel, should cover approximately 6m².

Cementitious Powder Tile Adhesive

1 x 20kg bag, when using a recommended 6mm notched trowel (3mm bed thickness), should cover approximately 4 - 5m².

Silicones

1 x 310ml tube, when using a 6mm diameter bead, should cover approx. 11 linear metres.

Grouts

Grout usage will also vary to a far greater extent depending on the style and size of tiles used, as well as the final appearance required. A 3kg bag will cover approximately 10 - 12m² when using 150 x 150mm tiles and 3mm joints.

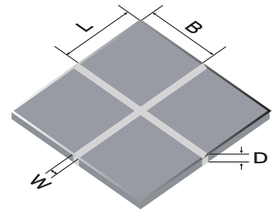
For a guide calculation for all other installations, please use the formula below or visit **ultratilefix.co.uk.**

Formula & Calculation

Product	Coverage Ratio
UltraTileFix ProGrout Smooth	1.2
UltraTileFix ProGrout Flexible	1.2

Step by step guide

1. Add together the length and breadth of the tile in mm.
2. Multiply this result by the joint width multiplied by the joint depth in mm.
3. Multiply this result by the coverage ratio.
4. Divide the result by the length multiplied by the beadth of the tile in mm. The final result is the material requirement in kg/m².



Example

$$\frac{[\text{Length + Breadth of Tile}] \times [\text{Width x Depth of Joint}] \times \text{Coverage Ratio}}{[\text{Length x Breadth of Tile}]} = \text{Kg/m}^2$$

Therefore

Tile Size:	150mm x 150mm
Joint Size:	6mm x 3mm
Product:	UltraTileFix ProGrout Flexible
Coverage ratio	1.2

$$\frac{[150 + 150] \times [3 \times 6] \times 1.2}{[150 \times 150]} = 0.288\text{kg}$$

Note: The above coverage is provided as a guide only and reflects typical tiling applications; therefore it should not be used as an exact material requirement calculation. Please note that the actual coverage may vary depending on substrate, tile size (width, length and thickness), desired effect and size of joints. For further help and technical support, please call the UltraTileFix team on +44 (0)1827 254402 or email ultratilefix@instarmac.co.uk.

UltraTileFix Technical Department **01827 254402**

COMMON TERMS

There is a great deal of terminology used within the tiling industry. The following is a collection of the most common terms and their meanings.

Common Terms

Additive: Generally refers to a liquid polymer that can be added to a grout or adhesive to improve its adhesion and flexibility.

Adjusting time: The length of time after fixing a tile that it can still be adjusted without detriment to the adhesive bond strength.

Buttering: The process of spreading a thin layer of adhesive on the underside of textured tiles directly before bedding. This is to ensure a full bed adhesive is achieved.

Calibrated/Un-calibrated: A reference to the thickness of tiles. Calibrated tiles are manufactured to give a uniform depth so can be bedded onto adhesive using the same bed depth. Un-calibrated tiles are typically natural stone of varying thickness and require thicker bed depths.

Efflorescence: The appearance of light deposits of salts on cementitious materials, occasionally visible in grout lines. It is as a result of moisture bringing salts to the surface that when dry leave a white powdery deposit showing light and dark variations within the grout. It can occur due to moisture migration from the background substrate, by watering or premature cleaning off of the grout. It is not detrimental to grout performance.

Finished walls and floors: Prior to any tiling it is important that walls and floors are finished providing the level of smoothness and regularity required. This may be by means of rendering or plastering on walls or by use of a suitable smoothing compound on floors. A wall classed as finished and ready for tiling will have no greater than a 2mm deviation under a 2m straight edge. A finished floor, a 3mm deviation under a 3mm straight edge.

Fixing time: The length of time, after applying an adhesive, that the tiles can be fixed.

Frost-resistant: The ability of a tile, adhesive or grout to perform even when the external conditions can result in frost formation. The tiles usually have to have very low water absorption to ensure cracking does not occur.

Grout after: Period after which the tiles are firmly set into the adhesive and will allow grouting to begin without disturbing the bond of the tile.

Internal/external: Products that are suitable for both internal and external use without affecting their performance parameters.

Laitance: A term used to describe a fine particle material deposit (often referred to as 'fines' or 'fat') found on the surface of cementitious or calcium sulphate subfloors. The deposit is a weak interface and should be removed to ensure the tile adhesive has a sound, strong surface to bond to. Laitance should be mechanically removed (often followed by vacuuming), and is caused by too much water when installing a screed. It can also be found when a levelling compound has been incorrectly used.

Movement joints: Gaps left in tiled floor designs and filled with a flexible material to enable the substrates and/or building to move independently of the tiling. Typically between different substrates, where tiles abut uprights, at corners and where expansion joints are present in the existing floor. Movement joints are essential design features.

Mould resistant: The ability of a product, usually a grout, to resist the growth of mould.

Open time: The time, usually in minutes, after application of an adhesive within which it will still bond and secure the tile. This can be influenced by the nature of the substrate (with absorbent substrates reducing open time) and also the ambient conditions where warm, dry conditions reduce the open time.

Polymer modified: This term refers to adhesive and grout formulations that include added polymer for increased adhesion and flexibility. Polymer modified products are common due to the increased use of vitrified and porcelain tiles, which have a low absorbency and require a 'better' adhesive to adhere them.

Pot life: The length of time after mixing a grout or adhesive that you have to use it. After the pot life has been reached, the mixing product should be discarded. Water should not be added to try and regain its characteristics.

Primer: A liquid applied to a substrate prior to tiling. Used either to enhance adhesion or to reduce porosity providing a longer open time for the adhesive.

Rapid setting: An adhesive modified so it sets rapidly, by utilising different cements and technologies. Enables tiling and grouting to be carried out in a shorter time frame.

Ready mixed: Adhesives that are supplied ready for use, without the requirement to add any water or liquid polymer. Usually acrylic based and generally only used for wall tile installations where set time is not so critical.

Hard/Set time or 'Walkability': The time, usually in hours, after which a bonded tile can be grouted and/or walked upon without affecting the bond. The set time for ready mixed adhesives is greatly dependent on the type of tiles and substrate.

Slump or slip: The vertical movement of a wall tile after it has been bedded into an adhesive. Traditionally battens have been used to prevent slump but modern adhesives are modified with anti-slump or anti-slip characteristics.

Solid bed fixing: A term used to describe a bed of adhesive of greater than 95% contact between tile back and adhesive, and between adhesive and substrate. This is recommended on all floor and large format wall installations.

Tanking: Applying a liquid waterproof membrane, usually incorporating a mesh, in areas such as showers to protect moisture sensitive background substrates from water impregnation.

Tensile adhesion strength: A standard test used to determine adhesion strength of tiles and adhesive. Usually quoted in N/mm^2 and the higher the number the greater the bond between the materials.

Tile after: This is the time after which the tiling process can start. Depending on the type of application being used, priming is generally the first stage.

Tile backer boards: These boards can be constructed from a variety of materials including cement, insulation or resin based compounds reinforced to give added strength. These boards usually offer waterproofing and/or insulation properties.

Uncoupling membranes: These are membranes used below new tiling installations and generally fixed direct to the floor screed for the purpose of preventing known problems in the subfloor effecting the new tiling installation. By creating a separation layer between the tiles and the screed can effectively overcome substrate movement tensions, and stress crack issues. They can also be used to provide waterproof protection neutralising vapour pressure build up in problematic, as well as damp screeds. They can be used above underfloor heating systems.

Underfloor heating: There are two basic types of underfloor heating systems. The first uses warm water pipes either encased within the floor screed or fixed into pre-formed insulation panels. Once positioned, installed and commissioned the floor covering can be installed. Hot water piped through the system provides the heating. The second system uses electrical heating mats placed on to the prepared floor and connected to wall mounted thermostatic controls. Once commissioned the floor covering is installed.

Waterproof: The ability of an adhesive or grout to prevent the passage of water. Normally epoxy or resin materials, which are often also chemically resistant.

Water repellent: Used usually when referring to grout, it's the ability of the product to repel water from its surface. Does not imply a waterproof grout.

Water resistant: The ability of an adhesive or grout to still retain its performance even when subject to full immersion in water.

Water staining: A situation where moisture from adhesives or grouts gets into natural stone and dissolves existing materials resulting in discolouration, usually of the edges, but sometimes the faces of the tile. The use of rapid set products minimises this risk, as does sealing of tiles prior to grouting.

Working time or 'Workability': The time, usually in minutes, after mixing an adhesive or grout that will still retain its characteristics to enable it to be applied, bedded onto and finished. With rapid set products the working time will be reduced the longer the material is left in the mixed container. Also, warmer temperatures will reduce the working time.

UltraTileFix Technical Department **01827 254402**

TILE TYPES

The range of tiles available today is almost endless, and will continue to develop.

Opposite is a summary of the most common types and a description of their properties and make up.

Those most traditionally used are manufactured from raw materials to create a ‘tile’ with a variety of performance and decorative characteristics.

UltraTileFix Technical Department **01827 254402**

Tile Types

Ceramic: A tile consisting of mixtures of clay, which are pressed and kiln fired at high temperatures, to give a hard ‘bisque or biscuit’. The ‘biscuit’ has a relatively high degree of absorbency enabling the adhesive to bond fairly easily. Ceramics may be left unglazed but are more often glazed to give more decorative options as well as physical benefits. This includes terracotta and quarry tiles. Ceramic tiles are generally not considered suitable for external use.

Vitrious (fully vitrified and semi-vitrified): Similar in manufacture to ceramic tiles, but incorporating different clays to provide tiles that are harder, denser and less absorbent. They may be fired for longer and at higher temperatures than ceramics. The term vitreous simply means ‘glass like’. The classification for ‘fully vitrified’ is a tile with less than 3% water absorption. Fully vitrified tiles require the use of a polymer modified adhesive and may be used externally in areas for spas and swimming pools. Semi-vitreous tiles have a water absorption between 3-7%.

Porcelain: Porcelain tiles are made from a different blend of clay, and a manufacturing process similar to ceramics. This controls shrinkage and water use and results in a very dense, hard-wearing tile with an absorbency of less than 0.5%, suitable externally for commercial projects as well as for swimming pools and areas subject to frost. ‘Full bodied’ porcelain doesn’t show wear as there is no upper glaze. They are much more affordable and are nowadays also used in domestic installations.

Terrazzo: Either pre-manufactured or laid in-situ, terrazzo consists of granite and marble chips in a Portland cement, or sometimes epoxy resin binder. They can be polished to give a low absorbent and high strength tile suitable for commercial use.

Agglomerate (quartz): This type of tile is manufactured by mixing graded pieces of granite and marble with cement and resins to give a pre-formed tile. They generally have low absorption. These tiles are sometimes referred to as quartz. For use of these type of tiles with underfloor heating always consult the manufacturer for guidance.

Glass: Manufactured from glass, and available in many striking opaque colours. Traditionally manufactured in small sizes and often on mosaic backings, they are now available in much larger formats. They are very hard and offer extremely low porosity. There are presently no British or European standards covering glass tiles so it is always worthwhile contacting the manufacturer for adhesive recommendations. Typically a minimum of a C2 classification is required but some decorative tiles may require resin based adhesives.

Natural Stones

There is a wide variety of natural stones available today; all are cut from larger stones to make varied sizes and shapes with a host of characteristics. Always check with the supplier regarding a sealing product for use before and after grouting. Special care should be taken when dealing with resin backed stone.

Travertine: A form of limestone, travertine is very popular. It is a porous material and can be supplied with a good surface texture but can also be filled or honed to provide a smooth surface. Travertine should always be sealed before grouting. It is recommended to use a rapid set adhesive to minimise water absorption and potential staining.

Limestone: Available in a coarse or fine texture, and of varying strength, it is a porous material and should be sealed prior to grouting. It is recommended that a rapid set adhesive is used to minimise water absorption and potential staining.

Marble: Very durable and strong, available in a vast array of colours, due to impurities when being formed. Stronger than limestone and travertine, it is often supplied polished and sometimes cut down for mosaics. Although not as porous as limestone and travertine it is still recommended to seal prior to grouting.

Granite: Very strong stone suitable for heavy wear situations, that is resistant to most domestic use acids. It is porous and requires sealing before grouting. We recommend that a rapid set adhesive is used.

Slate: Very durable natural stone found in slabs that are split and then cut to size. Very hardwearing and offers a textured surface with a degree of anti-slip, making it ideal for external use. Slate, often supplied un-calibrated, should be sealed before grouting.

See Product Selector on pages **10 & 11** for correct choice of adhesives.

Tile Dimensions

The dimensions of any tile can play an important part in selecting the correct adhesive for use. Smaller tiles are generally easier to fix. The following common descriptions are used for different tile dimensions.

Mosaic: Typically glass or marble of small dimensions (less than 50mm x 50mm) mounted onto backing paper. Supplied in 300mm x 300mm sheets, they can be cut down to smaller bands, enabling feature strips to be created. Generally mosaics do not require special adhesives but extended set products may be beneficial to allow a longer working time for intricate designs.

Large format: There is no official definition for the dimensions of a tile classed as large format. For the purpose of this guide, any tile that has a perimeter measurement in excess of 1.6m is classed as large format i.e. 400mm x 400mm or 600mm x 200mm. Large format tiles require the use of higher strength polymer modified adhesives with improved slip and slump characteristics.

Uncalibrated: This is a term used for natural stone tiles that are not cut to give tiles of the same thickness. Unlike manufactured tiles, un-calibrated tiles will require an adhesive capable of being used at thicker bed depths to ensure a consistent finished surface level is achieved.

.

SUBSTRATE PREPARATION

The suitability of a substrate should always be fully assessed before carrying out any tiling.

Substrate preparation

The main criteria to be assessed is:

- Is the substrate strong and stable?
- Has the substrate dried/cured completely?
- Is the substrate smooth and reasonably level?
- Is the substrate porous or non-porous? A test area should be used.

If the answer to any of these is 'no', then the substrate is not suitable to be tiled onto and further preparation is required before priming and fixing.

Why should you prime?

Priming of substrates is key to ensuring the selected adhesive can perform to its optimum. There are three basic reasons why priming is important. UltraTileFix provides the perfect solutions.

1. The sealing of substrates to reduce moisture absorption from cementitious adhesives enabling them to hydrate and cure properly. We recommend the use of UltraTileFix ProPrimer.
2. On dense and impervious substrates it is beneficial to utilise a bonding primer to enhance the adhesion of the tile to the substrate. Such substrates would include epoxy damp proof membranes, tile on tile, asphalt and painted surfaces. For this we recommend the use of UltraTileFix ProPrimer neat.
3. On some substrates it may be necessary to create a barrier between the substrate and adhesive to ensure compatibility. This may be when applying cement adhesive to calcium sulphates or when bonding onto substrates affected by high alkali adhesives. We recommend that UltraTileFix ProPrimer is used when a barrier primer is required.

Is the substrate porous or non-porous?

General priming guidance is to use UltraTileFix ProPrimer when tiling onto a porous substrate such as sand/cement. Whereas UltraTileFix ProPrimer neat should be used on non-porous substrates such as ceramic, terrazzo, asphalt and epoxy based damp proof membranes. We do not recommend the use of PVA for priming and have produced an article to explain this.

For underfloor heating systems in terms of priming please see specific advice on pages 35 - 37.

1. Article:

PVA for Priming - Good Practice or Bad Habit?
article available online visit **ultratilefix.co.uk.**

Grouting Tips

The finished look of a tiling installation is down to the design itself and the tiles selected. There are, however, a significant number of grout lines also visible which can affect the final appearance. It is therefore important to grout carefully, getting the best result possible. Here are some tips to follow:

- Mix the grout in accordance with the manufacturer's instructions. It is particularly important not to make the grout too fluid as this will cause separation, resulting in a weaker surface of varying colour.
- When mechanically mixing grouts a drill speed of less than 300RPM with the paddle held beneath the grout surface is ideal. Aggressive mixing can pull air into the product which can show as air holes upon curing.
- Be patient and leave the grout to stand for a couple of minutes after mixing, allowing the reaction of all components to begin. A quick stir after a couple of minutes standing is also advised.
- Do not re-mix the grout after this initial period, and do not add extra water to try and retain mobility. If the grout has thickened up too much to apply then discard it.
- Once in the joint, the grout should be left to firm before cleaning down. This is to ensure it remains in the joint and does not absorb significant levels of moisture when the area is cleaned.

NB: The time to firm is dependent on many parameters. The more porous a tile and/or substrate then the quicker the firming up will happen i.e. ceramic tiles will be able to be cleaned much earlier than porcelain tiles. Joint width will also play a part, with wider joints taking longer to firm. Finally, ambient conditions will have an effect. Cold and damp environments with poor ventilation will result in the grout taking longer to firm.

- When cleaning do not over apply water. We advise using a sponge or squeegee. If using a 'washboy', it is important to drain the sponge thoroughly otherwise this can reintroduce a significant amount of water into the grout, causing separation and surface patchiness when curing.

2. Article:

In-depth guide to using UltraTileFix grouts
article available online visit **ultratilefix.co.uk.**

WALL
TILING

For wall tiling applications it is essential that the wall itself has sufficient inherent strength to hold the proposed tile and the adhesive being used.

The following chart lists the accepted maximum loadings for a variety of wall substrates. In all cases, it is advised that where wall boards, of any type, are used that the manufacturer be consulted for further guidance.

Wall Substrate	Maximum tile weight (plus adhesive and grout*)
Gypsum plaster	20kg/m^2
Plasterboard (gypsum) unskimmed	32kg/m^2
Plywood (exterior grade)	30kg/m^2
Gypsum fibre boards	40kg/m^2
Tile backer boards	40kg/m^2
Glass reinforced cement sheets	50kg/m^2

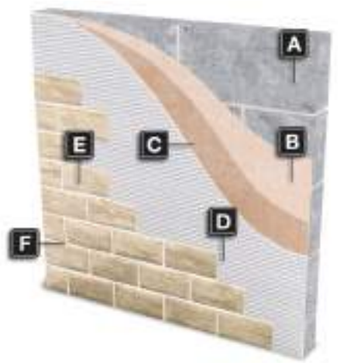
*Typically the weight of the adhesive and grout is from 2-4kg per m^2.

Wall types vary considerably but all have the same basic need to be structurally sound, strong, smooth and level.

It is important to understand that tile adhesives are not designed to be a method of overcoming surface undulations and unevenness.

The specifications for various substrates and their suitability are listed opposite. Should any other substrates be encountered, please contact the UltraTileFix Technical Department.

Plaster/solid walls/ skimmed plasterboard



- **A.** Block work wall construction
- **B.** Plaster (do not tile onto bonding/ backing plaster)
- **C.** Prime (if using a ready mixed adhesive priming may not be necessary)
- **D.** Apply adhesive (selected upon tile type)
- **E.** Install tiles
- **F.** Grout all joints

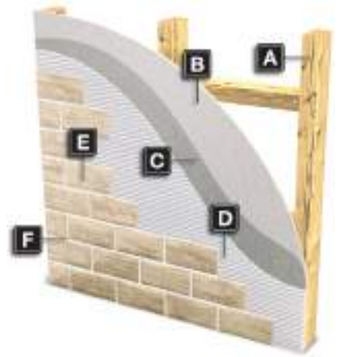
Instructions:

A plastered wall must be at least four weeks old prior to tiling to ensure adequate strength build up and suitable dryness. Prior to tiling ensure the plaster is dust free and is not showing any signs of efflorescence (see Glossary). Weak or friable plaster should not be tiled onto. Densely finished, polished or shiny plaster should be 'roughened' up to provide a good mechanical key. A stiff bristle brush should be used.

Priming:

Class as porous and refer to chart on pages 10 & 11.

Plasterboard on studwork or solid walls



- **A.** Studwork walls
- **B.** Plasterboard (always fix to the paper faced side of the plasterboard)
- **C.** Prime (if using a ready mixed adhesive priming may not be necessary)
- **D.** Apply adhesive (selected upon tile type)
- **E.** Install tiles
- **F.** Grout all joints

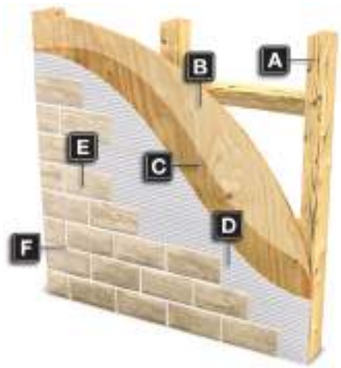
Instructions:

Plasterboards must be securely fixed to the original substrate to ensure they are firm, rigid and dry. Any supporting timber framework must be fully seasoned to ensure no warping or twisting occurs after installation.

Priming:

Class as porous and refer to chart on pages 10 & 11.

Plywood



- **A.** Studwork walls
- **B.** Plywood (it is recommended to seal all exposed plywood to ensure any high/low humidity fluctuations do not cause warping and distortion)
- **C.** Prime if required (if using a ready mixed adhesive priming may not be necessary)
- **D.** Apply adhesive (selected upon tile type)
- **E.** Install tiles
- **F.** Grout all joints

Instructions:

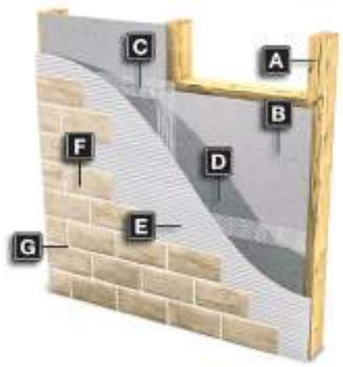
Plywood boards must be a minimum thickness of 15mm. The grade of plywood used should be suitable for exterior use and may include marine or Class 3 plywood.
The boards should be fixed to the framework at a minimum 300mm centres on both horizontal and vertical battens. The plywood must be screwed, not nailed to the framework to ensure a rigid, secure substrate. Any supporting timber framework must be fully seasoned to ensure no warping or twisting occurs after installation.

Priming:

Is not normally required with highly flexible adhesives. If in doubt please consult the UltraTileFix Technical Department.

UltraTileFix Technical Department **01827 254402**

Backer board

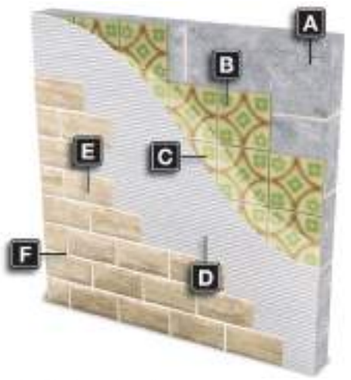


- **A.** Studwork wall
- **B.** Tile backer board
- **C.** Jointing mesh to reinforce the joints
- **D.** Prime (if using a ready mixed adhesive priming may not be necessary)
- **E.** Apply adhesive (selected upon tile type)
- **F.** Install tiles
- **G.** Grout all joints

Instructions:

Class as non-porous and refer to chart on pages 10 & 11.

Tiled



- **A.** Block work wall construction
- **B.** Existing tiles
- **C.** Prime using: UltraTileFix ProPrimer neat
- **D.** Apply adhesive (flexible only should be used)
- **E.** Install tiles
- **F.** Grout all joints

Instructions:

Ideally, existing tiles should be removed and then the substrate can be prepared as required. However, it is accepted that on occasions removal of existing tiles may not be an appropriate method so a 'tile on tile' installation is necessary. The existing tiles must be securely bonded to a sound stable background that is capable of accepting the weight of the original tiling plus the new tiles. Tiles that sound hollow or loose should be removed and the exposed area primed prior to applying a cementitious repair mortar. Existing tiles should be degreased and then lightly abraded to provide a clean mechanical key.

Priming:

Class as non-porous and refer to chart on pages 10 & 11.

Render

Instructions:

Allow a minimum of 4 weeks for the render to dry. Prior to tiling ensure the render is dust free and is not showing any signs of efflorescence. Weak or friable render should not be tiled onto.

Priming:

Is not normally required with highly flexible adhesives. If in doubt please consult the UltraTileFix Technical Department.

UltraTileFix Technical Department **01827 254402**

FLOOR TILING

The main consideration for laying floor tiles is the fact that once in use, they are not just decorative and hygienic but also functional. They will have to perform under daily trafficking, whether this is foot traffic in a domestic installation or heavy wear and tear in a commercial application.

It is therefore critical that full attention to correct preparation and application is paid.

With wall tiling there is not always a need for a full bed bond, but with floor tiles it is essential. The strength build-up of the adhesive is far more important too as the tiles need to be walked upon to grout, and in most cases, the floor needs to get back into service. To enable this we advise the use of powder products rather than ready mixed adhesives.

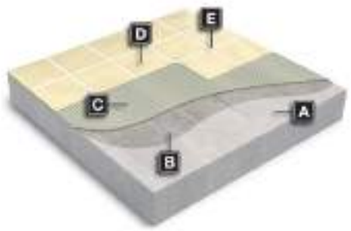
To ensure full bonding, the substrate should be as even and level as possible. In most cases, rough floors or floors with height variations can be prepared using UltraTileFix ProLevel One, UltraTileFix ProLevel Two and UltraTileFix ProLevel Fibre.

All offer extremely good flow, and a floor level classified as SR2 can easily be achieved (no greater than a 5mm deflection under a 3m straight edge).

With skill an SR1 floor can be achieved (3mm deflection under a 3m straight edge). Please turn to page 18 & 19 for information on these products or contact the UltraTileFix Technical Department.

Specifications for various substrates and their suitability are listed overleaf. Should any others be encountered, please contact the UltraTileFix Technical Department.

Sand/cement screed



A. Sand/cement screed or concrete floor

B. Prime: if the screed is rough or uneven prepare it using an application of an UltraTileFix levelling compound followed by another primer coat

C. Apply adhesive (selected upon tile type)

D. Install tiles

E. Grout all joints

Instructions:

The screed must have cured and dried under good ambient conditions. Any cracks should be repaired with a rapid repair mortar. Any weak or friable screed should be removed and repaired. Movement joints should not be covered with tiles as they are designed to allow for subfloor movement. Follow joints through to the tile surface and use an appropriate expansion material or cover strip. Fully dry rough or uneven screeds can be improved with an application of an UltraTileFix levelling compound. Before commencing the tiling process the substrate should be confirmed dry. If in doubt a moisture reading should be taken to confirm.

Concrete

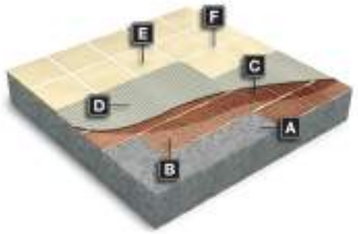
Instructions:

Concrete varies significantly in its finish, from tamped to power-floated. In all cases, the concrete must be fully cured and have been left to dry. For power-floated concrete it may be necessary to remove surface additives and hardeners by mechanical abrasion. Power-floated concrete should be considered a non-porous surface. Fully dry concrete surfaces can be improved with the application of an UltraTileFix levelling compound. Before commencing the tiling process the substrate should be confirmed dry. If in doubt a moisture reading should be taken to confirm.

Priming:

Tamped concrete – apply 1 coat of UltraTileFix ProPrimer (diluted 3 parts water to 1 part primer). Power-floated concrete – apply 1 neat coat of UltraTileFix ProPrimer neat. Allow the primer coat to dry before continuing.

Tiled



A. Concrete substrate

B. Existing tiles

C. Prime using: UltraTileFix ProPrimer neat

D. Apply adhesive (selected upon tile type)

E. Install tiles

F. Grout all joints

Instructions:

The subfloor should be assessed to ensure that all tiles are fully bonded. A mechanical abrasion of the tiles will clean and prepare the surface, whilst also helping to enhance adhesion. All tiles should be degreased and allowed to dry before proceeding. We recommend priming the tiles using a bonding primer.

Hard vinyl tiles

Instructions:

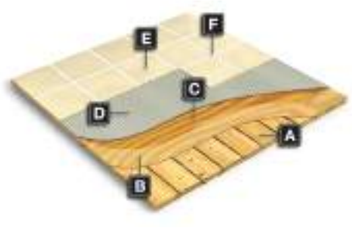
Not all vinyl tile flooring is suitable to be tiled over. Cushioned or flexible vinyl tiles should not be overlaid and must be removed along with the adhesive residue. Hard vinyl tiles should be lightly abraded (see NB below) and then primed with UltraTileFix ProPrimer neat (bonding primer).

NB:

Old 'crunchy' tiles should not be abraded as they may have been manufactured using asbestos fibres. Such tiles are typically 225mm (9 inches) square tiles and are often bonded onto a black adhesive. The use of an uncoupling membrane is advisable in such circumstances.

Timber/wood

Plywood overlay



A. Floorboards

B. Plywood overlay

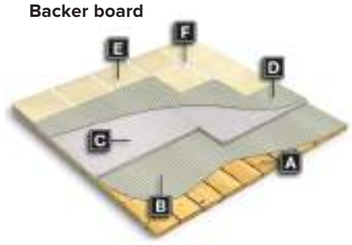
C. Prime (remembering to use UltraTileFix ProPrimer neat if marine grade is used)

D. Apply adhesive (flexible only should be used)

E. Install tiles

F. Grout all joints

Backer board



A. Floorboards

B. Adhesive

C. Backer board

D. Apply adhesive (flexible only should be used)

E. Install tiles

F. Grout all joints

Instructions:

Unlike sand/cement screed and concrete, which are inherently strong and stable without any vibration or movement, there are different considerations to be made with timber/wooden subfloors. Existing timber/wooden floors must be strong, rigid, stable and capable of withstanding the load of adhesive and tiles. They should be sufficiently supported to prevent flexing. Additional noggins may be required to stabilise the floor. Timber/wood is prone to movement under varying levels of humidity so adequate ventilation beneath is necessary. Identify if plywood is porous or non-porous prior to priming.

There are 2 options to enable tiling to be carried out on timber/wooden subfloors:

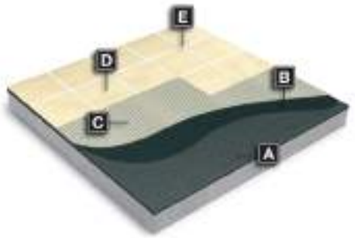
1. The existing timber/wooden subfloor should be overlaid using exterior or Class 3 plywood of a minimum thickness of 15mm. All cut edges and the underside of the plywood should be sealed prior to fixing. The plywood must be screwed, not nailed, at 300mm centres.

2. Option 2 is to overlay timber/wooden subfloors using a proprietary tile backer board. The backer board must be a floor grade product.

Follow the manufacturer's guidelines regarding fixing it to the floor. This may include both mechanical fixing with screws and bonding with adhesive.

Regardless of which option above is selected we always advise to use a flexible adhesive and grout when installing on timber/wooden subfloors. They need not be problematic if the correct approach is carried out. If in doubt contact the UltraTileFix Technical Department.

Asphalt



A. Flooring grade asphalt substrate

B. Prime using: UltraTileFix ProPrimer neat

C. Apply adhesive (selected upon tile type)

D. Install tiles

E. Grout all joints

Instructions:

Used on floors and roofs due to its ability to prevent moisture passing through. It varies in strength and flexibility depending on the desired end use. Flooring grade asphalt is the only material suitable for tiling onto. Do not lay onto roofing grade asphalt. It should be a minimum of 15mm thick throughout the entire area. The surface should be crack free. Newly laid asphalt must be fully degreased to ensure surface bloom does not hinder adhesion. The asphalt must be primed to enhance adhesion. The use of a flexible tile adhesive and grout is recommended.

UltraTileFix Technical Department **01827 254402**

Tiling onto Calcium Sulphate Screeds

Flowable calcium sulphate screeds, also known as anhydrite, hemi-hydrite and gypsum, have many advantages over traditional sand/cement screeds such as:

- Can be laid thinner, reducing loadings
- Can be manufactured using industrial by-products, so an environmentally friendly alternative
- Increased speed of installation as they can be pumped

It is important that calcium sulphate screeds are identified before any tiling installations are carried out because they have different requirements. They may not be visually different from traditional screeds so always enquire, particularly if the screed contains underfloor heating. We recommend the use of a barrier primer on calcium sulphate screeds to avoid migration of moisture between adhesive and subfloor.

Unlike sand/cement and cementitious products, which can still have extremely high tensile and compressive strength whilst retaining a high level of moisture, calcium sulphate screeds need to reach a level of dryness to enable them to perform correctly underneath the tiling. The approved standard moisture test method is to use a surface hygrometer. This is an insulated box, fixed to the unheated floor for typically 4 days, after which the moisture in the air trapped in the box reaches equilibrium. This air is then tested using either an analogue or digital hygrometer. If the reading is less than 75%RH (residual humidity) then the screed is dry enough.

Other indicative test methods may be used to help identify if moisture is a concern or if the screed is close to dry. A simple test is to tape a piece of plastic to the floor for 48 hours. Moisture condensing on the underside of the plastic or a darkening of the screed indicates moisture levels are still significant.

The recommended drying times of calcium sulphate screeds, as quoted by the manufacturers, are usually based on drying conditions at 20°C, low air humidity and an open surface with no materials overlaid.

This does not represent a typical site scenario so they should not be relied upon. It is also important to remember that underfloor heating must have been fully commissioned. This does not mean a simple air pressure test but means a full cycle through the heating range. This is necessary to:

A. Identify if any weaknesses are in the screed by showing likely points of cracking and spalling (typically due to poor installation of the screed with heating)

B. Assist the drying of the screed

Preparation

1. Once the above criteria has been met the screed is ready to receive this. To ensure consistency it is advisable that all screeds are mechanically prepared using a rotary disc to remove any laitance and weak upper surface (consult the screed manufacturer for their specific requirements). The screed must also then be made dust free.

2. Ensure that the calcium sulphate screed is fully dry (less than 75% humidity). If in doubt then the supplier or installer of the screed must be contacted to confirm that the drying period has been observed and gain their assurance that the screed is dry. The manufacturer of the screed will know better than anyone how long their own screed will take to dry out at certain depths.

3. In general calcium sulphate screeds take 1mm/day for the first 40mm to dry out and a further 0.5mm a day for anything thicker, so a 50mm screed will need a minimum of 60 days before being anywhere near dry. 80mm would be as long as 40 days plus a further 80 days giving 120 days minimum. Calcium sulphate can be force dried, but check with the manufacturer/installer of the screed on how to do this.

Priming:

We recommend applying 2 coats of primer, ensuring consolidation and isolation of the calcium sulphate. This allows the standard classified cementitious tile adhesives to be utilised in the normal manner.

Coat 1

4. Prime the floor with a coat of UltraTileFix ProPrimer. The primer should be diluted with 3 parts water and thoroughly scrubbed into the floor. Apply thinly and do not leave pools or puddles of primer. Leave to dry thoroughly, typically overnight.

Coat 2

4A. UltraTileFix ProPrimer should be diluted with 1 part water to 1 part primer. Brush or roller onto the floor applying thinly, avoiding pooling. Allow to dry to a tacky clear film, typically 4 - 6 hours.

5. If underfloor heating is present there should be expansion strips between the different heating zone areas to enable the screed to move independently, around any perimeters, and at upstands and door thresholds. In all cases these strips should not be tiled over but should be carried through to the upper tiled floor, using a silicone sealant or similar to enable a continuous floor to be achieved. When underfloor heating is present we advise that a polymer modified adhesive is used. It is always beneficial to use a rapid set product on these screeds to minimise the migration of moisture between screed and adhesive during curing.

Tiling onto Floors with Underfloor Heating

There are two basic types of underfloor heating:

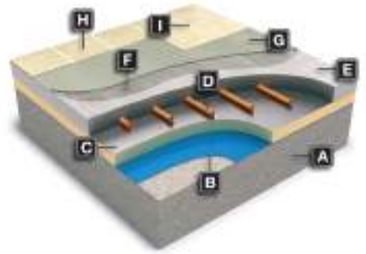
1. Warm water pipe systems either
(a) encased within the floor screed or
(b) fixed within pre-formed panels
(lightweight)

2. Electrical cable mats applied above the screed surface (often on backer boards and insulating systems)

Various underfloor heating manufacturers exist including Warmup who offer a range of systems across the different types, including Sticky Mat and Total-16. We recommend that you always refer to the manufacturer's instructions when installing underfloor heating.

Warmup
The world's **best-selling** floor heating brand™

Visit **warmup.co.uk** to download Warmup technical guides.



A. Concrete substrate
B. DPM
C. Insulation
D. Heating pipes
E. Screeds
F. Prime appropriately for the type of screed used
G. Apply adhesive (selected upon tile type)
H. Install tiles
I. Grout all joints

1a. Warm water systems - encased in screed

These consist of a run of pipes embedded within a pre-laid screed, often calcium sulphate based due to its flowing characteristics. The surface preparation and priming required before laying tiles is the same as for screeds without underfloor heating. Before any tiling is carried out, the following criteria must be met:

I. The screed must have been left for the minimum cure time before the heating is switched on (this is generally 21 days for sand / cement screeds, and 7 days for calcium sulphate screeds).

II. The underfloor heating must have been fully commissioned and tested. This is not a simple pressure test but must be a full heat up and cool down of the system. This is normally a 7 day cycle. Only by doing this can any screed weaknesses be identified.

III. All movement joints must be identified and followed through in the tiling. Screed movement under temperature change is a major cause of tiled floor failure so the need for movement joints is extremely important. Movement joints should be present between all different heating zones, door thresholds, upstands and perimeters.

IV. Traditional cement based subfloors and calcium sulphate screeds must be tested for moisture levels and confirmed to be 75% RH or less using a hair hygrometer. Proprietary cement based screeds may cure and dry at different rates so always check with the manufacturer.

V. The adhesives and grouts selected must be flexible.

VI. Do not run the heating at high temperatures as this will force dry the adhesive and grout, causing cracking and lifting. Have the heating on at a 'cutback' temperature whilst tiling - this means a floor temperature of max 15°C.

VII. Once the tiling and grouting has been carried out the temperature must remain the same for a minimum of 7 days. After this time, the underfloor heating can be brought up to full working temperature slowly. A maximum water temperature increase of 5°C per day is advised.

UltraTileFix Technical Department **01827 254402**

Tiling onto Floors with Underfloor Heating

1b. Warm water systems - fixed within pre-formed insulation panels

This popular alternative system removes the need for a screed by using pre-cut channels in the insulation panel to house the warm water pipes. This system provides a lightweight base option, which can be tiled onto directly. Often the surface of the insulation panel can be faced with an aluminium foil to help spread the heat. Prior to commencing tiling the following must be met:

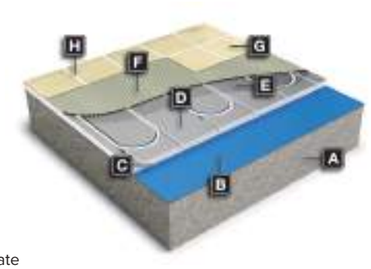
I. All underfloor pre-formed panels must be secured firmly to the substrate and be sound and solid, free from movement. Always consult the manufacturer's installation instructions.

II. The underfloor heating must be fully commissioned and pressure tested before tiles are installed to ensure there are no leaks.

III. Once water pipes have been positioned and within 24 hours prior to applying the tiles, it is advised that all panels are cleaned and ensured dust free. We recommend priming the entire surface of the panels with a neat coat of UltraTileFix ProPrimer including the installed heating pipes and cavities that do not have pipe work in them.

IV. Once the primer has fully cured, tiling can commence using either an S1 or an S2 adhesive. Ensure all cavities within the panels are first filled with the adhesive using a smooth edged trowel. This will provide a level surface to the panel before finally applying the same chosen adhesive with a notched trowel to the bed thickness required.

V. Follow the same guidelines as in 1a. VI. and VII. to curing of adhesives and grouts and operating the underfloor heating.



A. Substrate
B. Apply DPM if required on newly laid screeds
C. Adhesive as specified by underfloor heating manufacturer
D. Pre-formed underfloor heating panels
E. Prime using UltraTileFix ProPrimer
F. Apply S1 or S2 adhesive
G. Install tiles
H. Grout using a flexible grout

2. Electrical cable mats

There are numerous manufacturers of 'radiant mat' electric underfloor heating so always contact them directly for specific advice. The systems consist of electric cables or mats which need to be fixed to the substrate in a prescribed pattern to ensure even heat throughout the floor.

Care should be taken to avoid snagging (therefore damaging the cables when applying adhesive) and thermal shocks when the heating is utilised. There are two options which can be used when installing tiles onto these systems:

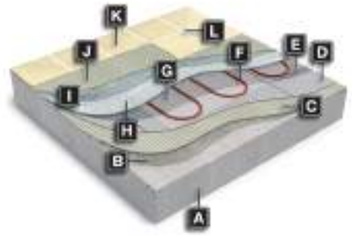
1. Applying a smoothing compound to embed the cables
2. Applying a smoothing compound to bring to cable height and avoid snagging when applying the tile adhesive

In both cases, the following criteria apply:

1. The subfloor must be sound, strong, stable and suitable to receive a cementitious smoothing compound.
2. Any expansion joints in the floor design must be followed through into the finished tile installation and must not be covered over. This is most often between different heated areas and/or substrates.
3. We recommend that timber substrates should have a suitable backer board mechanically and/or physically bonded prior to installing the electric underfloor heating systems to minimise thermal substrate movement as heating is switched on and off.
4. Before any preparation or tiling work is carried out the system must be tested to confirm it is fitted correctly and functioning. This should also be done during and after installation to ensure no damage has occurred.
5. Substrates must be primed with UltraTileFix ProPrimer. The priming will usually improve the adhesion of the tape utilised in fixing the cables but if they were already present it is important not to flood the floor with primer. Apply only a thin film.
6. Select the most appropriate smoothing compound for the substrate. Generally UltraTileFix ProLevel One or UltraTileFix ProLevel Fibre is preferred for solid, strong substrates such as concrete or sand/cement. UltraTileFix ProLevel Two for difficult to bond to, dense surfaces such as ceramic tiles or where the substrate is mechanically fixed only e.g. backer boards.

Check with the UltraTileFix Technical Department for the most suitable product.

7. Apply the selected compound by pouring onto the floor and gently smooth with a straight edge metal trowel. Either cover the highest point of the cables by a minimum 3mm or fill in between the cables without applying compound over the surface (this will enable the tile adhesive to be applied without snagging the cables). Allow the smoothing compound to cure. Time for this will depend on thickness, substrate and conditions.
8. Apply either (as per instructions for an absorbent cement based floor) and allow to dry. Fix the tiles using a flexible cementitious adhesive. Allow to cure as per datasheet instructions, before grouting with a flexible cementitious grout. Both products should be left to cure for a minimum of 14 days, before gradually bringing up the temperature of the floor in accordance with the manufacturer's instructions.



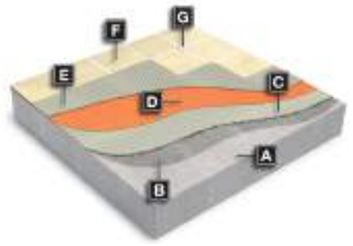
A. Concrete substrate
B. Prime
C. Adhesive
D. Thermal tile backer board
E. Prime
F. Under tile heating mat
G. Prime
H. Level to embed or cable height
I. Prime
J. Apply adhesive (select upon tile type)
K. Install tiles
L. Grout all joints

UltraTileFix Technical Department **01827 254402**

Tiling onto Floors using an Uncoupling System

Uncoupling systems are an excellent method of fixing tiles in very testing environments. The science behind uncoupling can be summarised as: “A system used to isolate the finished tiled floor from the subfloor to prevent damage from lateral movement, subfloor cracking and water penetration." Systems generally involve the use of a profiled polyethylene mat with a fleece underside which is bonded to the substrate using a flexible adhesive. Tiles are then bonded to the mat using a flexible tile adhesive and grout. For full information on how these systems work and the installation methods required, please refer to the manufacturer’s instructions. However, the following general criteria should always be met:

1. The substrate must be even, rigid and load bearing.
2. Boarded floors (timber or backer boards) must be screwed down as per instruction, and replace any boards that are damaged. Uncoupling mats will accommodate lateral movement but are not designed to withstand vertical movement, so subfloors must be braced to make them sound and strong. All timber floors must have adequate under floor ventilation to prevent the timber from moving, post installation, due to humidity changes.
3. Tile selection should be made on the basis of the likely load that the flooring will be subjected to i.e. thickness and strength in accordance with end use expectations.
4. Prime the subfloor, if required, with UltraTileFix ProPrimer.
5. The anchoring fleece should be bonded using adhesive. The adhesive must bond to the substrate and mechanically anchor the fleece to the underside of the mat. We would recommend using a 4mm notched trowel with flexible adhesive.
6. Once the mat is secure the tiles can be fixed using an UltraTileFix flexible adhesive. It is advised that the cavities in the matting are first filled with adhesive using a smooth edge trowel before finally applying with a notched trowel to achieve the bed thickness required.
7. Grouting should be carried out using UltraTileFix ProGrout Flexible.



A. Load bearing substrate
B. Prime
C. Adhesive
D. Uncoupling membrane
E. Apply adhesive (flexible only should be used)
F. Install tiles
G. Grout all joints

Movement Joints in a Tiling Installation

The inclusion of movement joints in a tiling installation is something that should be incorporated at the design stage by the specifier or architect. However, it is beneficial to have a basic understanding of where, when and why movements joints should be used.

Background to movement joints

Regardless of the type of tile being used, they must all be considered as ‘solid’ materials with very little dimensional change despite conditions. Building movement may occur due to changes in conditions, physical movement due to size, settling or drying out of the building, weight loading, level of trafficking, thermal changes or simply due to the construction design itself. Floor construction in particular needs careful consideration as the functionality of a floor is such that its stability and integrity must be maintained to enable the building to be utilised.

Walls

All junctions between walls and floors should have a movement joint included. However, walls themselves are under continual stress and have the potential for movement, so consideration of movement joints should be made. Consider the use of a movement joint in all of the following areas:

- They must be incorporated where there are any existing movement joints within the wall structure. They should be aligned directly over the existing structure joint and be at least as wide.
- At internal corners between walls to relieve stress under thermal, vibration or any other movement. This includes where internal walls meet ceilings; a suitable silicone sealant may be used.
- Where the wall tiling meets a different substrate – the tiles should be left short and a movement joint utilised. A suitable silicone sealant should be used.
- Where tiling bridges are used across different substrates a movement joint should be created at the junction.
- On large walls movement joints should be included both horizontally and vertically. Subject to the building design, the joints may need to be incorporated anywhere between 3m and 10m.
- External wall joints (close to external angles) and all internal angles. The inclusion of a movement joint will prevent fracture and bulging of tiles with building, thermal and/or vibration movement.
- Movement joints must be incorporated at more frequent positions, should the walls be subject to significant thermal or vibration movement.

Movement joints can be incorporated into the design to minimise aesthetic concerns.

Floors

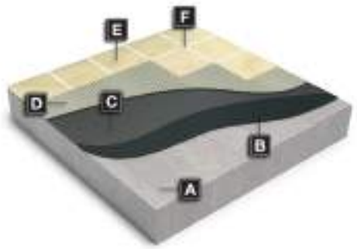
Including movement joints in floors enables the tile bed to move in unison with the individual substrates. Selection of movement joint type will depend on joint width requirement, finished floor use and movement capability. The range of materials available and their typical area of use include; aluminium for general commercial installation, brass and stainless steel for heavy commercial and factory use, and PVC for most other applications. Always consult with the manufacturer as to the most suitable joint for your application. Consideration to the use of a tiling movement joint must be given in all of the following areas:

- They must be incorporated and aligned with any movement joints within the floor’s construction. The joints should be continued through the entire depth of the tiles and adhesive.
- At specified distances across a floor to create individual tile beds (general consensus is that movement joints should be utilised at distances between 5m and 8m).
- Floors with underfloor heating systems should incorporate movement joints with a limited bay size of a maximum of 25m^2.
- At day joints or stress induced saw cuts in subfloors. The level of movement at these joints is often unknown and is usually dependant on the age of the building and whether the subfloor is fully dry. If in doubt, incorporate a movement joint.
- All perimeters and any fixed features which interrupt the floor, such as pillars or aisles, should have an allowance for movement. Sometimes this can be a suitable silicone sealant, or if underneath skirting it may simply be a gap. In areas of high thermal change, such as conservatories this is extremely important.
- Movement joints should be included between any underfloor heating zones to enable each to perform independently.
- Wherever there is a change in substrate a movement joint should be included. This will enable each substrate to behave independently.
- Movement joints should be placed directly above any supporting walls or structural beams as they will add rigidity to the floor. The remaining floor area may be prone to a degree of flex or vibration.
- Junctions between floors and walls.

Movement joints can often be incorporated into the floor design to minimise aesthetic concerns whilst ensuring integrity of the tiled floor.

UltraTileFix Technical Department **01827 254402**

Using a Damp Proof Membrane



A. Sand/cement screed or concrete floor

B. Damp proof membrane

C. Prime using UltraTileFix ProPrimer neat

D. Apply adhesive (select upon tile type)

E. Install tiles

F. Grout all joints

A surface damp proof membrane (DPM) is a liquid system that when applied to a damp substrate:

a) bonds strongly to the surface.

b) cures to form a hard layer that controls moisture vapour permeability to the surface.

UltraFloor DPM IT rapid curing primer membrane is a two component, solvent free epoxy resin system for use as a surface DPM and as a screed bonding aid (primer) for industrial flooring applications. It is supplied in a twin pack dual chamber to enable ease of transport and mixing. The product performs by a reaction between the resin and hardener components to give a durable continuous membrane. When mixed the product is a black colour enabling easy identification of the applied areas.

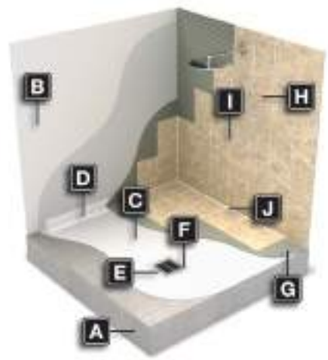
It is suitable for use as a single coat DPM to suppress residual moisture in concrete and sand/cement screed where the moisture levels are 98% RH or less (when tested with a properly calibrated surface hygrometer in accordance with BS 8203). It may be used as a two-coat application on subfloors where there is an absence of a constructional base DPM provided there is no hydrostatic pressure.

UltraFloor DPM IT should not be used in projects where hydrostatic pressure is a concern. In such cases the use of pressure relief drainage and/or external tanking systems must be the primary method of protection against moisture.

Application steps:

1. All substrates must be prepared to leave a sound, clean and surface dry subfloor. Oils, grease and other contaminants that may hinder adhesion must be removed. This includes release agents used in concrete curing processes as well as laitance, contamination and any weak surface materials. Substrates should be of a minimum 25N/mm^2.
2. Apply UltraFloor DPM IT to the substrate by pouring it onto the floor area to be treated. For use as a DPM the product should be spread using a suitable notched trowel to determine the correct coverage rate. Over roll the serrations using a short pile roller pre-wetted in UltraFloor DPM IT to ensure a uniform coating is achieved. This should be done immediately following trowelling.
3. UltraTileFix ProPrimer should be applied neat as a single coat, using a brush or roller. Apply to give a thin uniform coverage with no pooling of the primer. Ensure a complete overall application is achieved. Once dry, the primer will exhibit a light tack and is ready to receive smoothing underlayments and tiling adhesives.

Waterproof/Tanking Systems



A. Concrete substrate

B. Plasterboard

C. D. E. F. Apply tanking system according to application method

G. Apply adhesive (selected upon tile type)

H. Install tiles

I. Grout all joints

J. Seal with silicone

There is a need to waterproof or 'tank' a tiling installation when the substrate to which the tiles are to be fixed will either be affected by contact with water or will allow moisture to pass through it. The prerequisite of a tanking system is to waterproof, together with providing strength and flexibility, whilst still enabling tiles to adhere.

Tanking systems are designed for use on internal applications where intermittent and frequent wetting occurs, such as showers, wetrooms and saunas. Different waterproofing requirements are needed for areas of permanent or prolonged immersion in water such as swimming pools and Jacuzzis.

Tanking systems are suitable for application to most wall and floor substrates, provided they are mechanically secure and stable. If significant flexing or deflection occurs this should be remedied before tanking application.

Select a flexible adhesive, such as UltraTileFix ProFlex SP or ProFlex S2, and grout that are suitable for the chosen tile type and size.

To view the Application Method for UltraTileFix ProShield please visit **ultratilefix.co.uk.**

Tiling Swimming Pools/Permanently Wet Areas

Swimming pool construction is governed by the BS 8007: Code of Practice for Design of Concrete Structures for Retaining Liquids. The standard clarifies how such constructions must be carried out and how to test for water tightness. As far as fixing tiles is concerned, it needs to be confirmed that the construction has been carried out correctly and tested before tiling commences. There are also some basic timeframe principles:

- The construction itself must have had a minimum 6 weeks to cure and harden.
- Any further renders or screeds used must have had a minimum of 3 weeks to cure.
- Tiles should be fixed and allowed to fully cure before grouting, usually a minimum of 3 days.
- The construction must then be left for a minimum of 3 weeks before water is introduced (no greater than a depth of 750mm per day).

The methods used to create watertight construction can differ. Ensure that the surface to be tiled is suitable to receive a cementitious tile adhesive and is prepared correctly. Preparation must include removal of any laitance from the renders or screeds and cleaning off any mould release agents that may have been used when constructing the shell. Power washing is often sufficient to prepare the surface. Although the adhesives and grouts normally used are classified as water-resistant this does not imply that they will prevent water passing through. This only confirms that they retain their strength and adhesion even when fully immersed. It is critical that the construction is inherently watertight. If a waterproof grout is required, or it is known that aggressive chemicals are to be used for cleaning, or if power wave machines are incorporated then consider using an epoxy grout.

Low absorbency tiles should be selected, ideally less than 0.5% absorption. Absorbent surfaces should be allowed to dry and then primed with UltraTileFix ProPrimer. Dilute the primer 1 part to 3 parts water and then allow to dry. Tiles should be fixed using a highly modified cementitious adhesive, in accordance with EN 12004 – capable of withstanding continual immersion. UltraTileFix recommend ProFlex SP, ProFlex SPES or ProFlex S2. It is critical that a full bed adhesion without any voids is created and to ensure this, a minimum 3mm bed depth is recommended.

There will be a requirement for movement joints (please see BS 5385) which should be considered before tiling commences. A suitable sealant should be selected and used on all wall and floor junctions at least.

FLOWABLE PAVING GROUT

UltraScape Flowpoint

Rapid Setting Flowable Grout, Regular, ECO and Smooth Varieties

Size: 25kg
Colours: Natural & Charcoal

- Mixes quickly and easily on-site with water
- Economical to use
- Can be used in the rain and is frost-resistant
- Exceptional bond strength
- Fast setting - walk on in an hour
- Suitable for large scale projects
- Perfect stain free finish
- Suitable for sandstone, limestone, concrete and granite paving types

How to Use UltraScape Flowpoint

1. Mix UltraScape Flowpoint in a tub with clean water. Add the powder gradually and mix with a drill and paddle for 2-3 minutes until a consistent mix is attained.
2. Lightly pre-soak the laid area ensuring that the water does not pond anywhere.
3. Pour all over the newly laid paving.
4. Apply to the area with a squeegee at a 45° angle to the joints.
5. Use the material efficiently to ensure minimal grout is left on the surface.
6. Wait for UltraScape Flowpoint to become hard enough for firm finger pressure (30 minutes at 20°C - warm temperatures will accelerate setting time).
7. You may find that the surface area where you have applied the grout may start to matt off. Lightly sprinkle water on top of the paving and using either a soft or hard bristle brush, brush the area to agitate the surface area.
8. Wash off with clean water, at a 45° angle to the joints.
9. Repeat this process 20-30 minutes later.

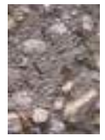
GROUT COLOURS

Flowpoint Natural Grey

Flowpoint ECO Natural Grey

Flowpoint Smooth Natural Grey

Flowpoint Charcoal



Flowpoint ECO Charcoal

Flowpoint Smooth Charcoal

UltraTileFix work hard on establishing partnerships with market-leading industry experts to ensure all UltraTileFix products offer complete compatibility.

By working with complementary brands such as those below UltraTileFix offer solutions you can trust.

Warmup®
The world's **best-selling** floor heating brand™

Schlüter® Systems

HardieBacker®

NoMorePly®

prowarm™

Lithofin®
The Professional Solution

Uniclass	EPIC
L673	F73
CI/SfB	
Yt3	

ULTRATILEFIX.CO.UK

INSTARMAC

Instarmac Group plc
Head Office
Danny Morson Way
Birch Coppice Business Park
Dordon, Tamworth
Staffordshire
B78 1SE

t: +44 (0)1827 872244
f: +44 (0)1827 285386
enquiries@instarmac.co.uk

Instarmac Group plc
Scotland Office
Suite 8,
Red Tree Business Centre
24 Stonelaw Road
Rutherglen
G73 3TW

t: +44 (0)141 613 2144
f: +44 (0)141 613 2145
scotland@instarmac.co.uk

instarmac.co.uk

Vers1.04.2018