

# TECHNICAL DATA SHEET

# LevelMore Flex&Fibre

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Kelmore's LevelMore Flex&Fibre is a flexible, fibre reinforced, rapid setting levelling and smoothing compound that can be applied from 2mm to 50mm in a single application. Ensuring excellent workability and moisture tolerance, it is suitable for use on a wide range of subfloors, including applications below damp proof membranes. Boasting superb flowing capabilities and dimensional stability, this protein-free product sets with an outstanding surface finish and is ready for foot traffic after just 90 minutes. Resilient floor coverings can be fitted after 3 hours, and porcelain, ceramic, and natural stone tiles can be fixed after 2 hours. Demonstrating its true versatility, it is suitable for both interior and exterior use and can also be installed as a durable wearing surface. LevelMore Flex&Fibre has been manufactured to the highest of standards using unique technologies, extensive knowledge and outstanding raw materials. When compared to the production of traditional cementitious flooring compounds, this results in a significant reduction in CO<sub>2</sub> emissions.



## LevelMore Flex&Fibre

Classification (EN 13813)		CT-C25-F7
Pack size		20kg
Water required per 20kg bag		4.5 to 5.0 litres
Application temperature (air and background)		≥ 5°C
Application thickness	Minimum	2mm
	Maximum	50mm
When bulked out		75mm
@20°C	Working time	30 minutes
	Walk on	90 minutes
	Tile after	2 hours
	Fit resilient floor coverings after	3 hours
Consumption per mm thickness		Approximately 1.55kg /m <sup>2</sup>
After 28 days	Compressive strength	25 N/mm <sup>2</sup>
	Flexural strength	7 N/mm <sup>2</sup>

## Areas of Use

Floors	Interior	Domestic	Below Damp Proof Membranes	Water Piped Underfloor Heating	Limited Movement/Vibration
	Exterior	Commercial		Electric Underfloor Heating	

Suitable Floor Backgrounds				PRIMER REQUIRED
<b>A</b> Cement:Sand Screed (inc. Heated)	<b>A</b> Concrete	<b>A</b> Plywood Overlay (Class 3)	<b>A</b> Tile Backer Boards	<b>PrimeMore Universal</b>
<b>B</b> Asphalt (Flooring Grade)	<b>B</b> Epoxy DPM	<b>B</b> Existing Ceramic, Porcelain, and Natural Stone Tiles	<b>B</b> Metal (Steel)	<b>PrimeMore Grip</b>
<b>C</b> Calcium Sulphate/Anhydrite Screed (inc. Heated)				<b>PrimeMore CS</b>
<b>A</b> Prime with one coat of PrimeMore Universal diluted 1:3 with water. Depending on the porosity of the background, additional coats may be required.		<b>B</b> Prime with one neat, undiluted coat of PrimeMore Grip.	<b>C</b> Prime with one neat, undiluted coat of PrimeMore CS.	

The primer must be allowed to dry before applying LevelMore Flex&Fibre.

## BACKGROUND AND SURFACE PREPARATION

Backgrounds must be sufficiently dry and strong enough to carry the total weight being applied. All surfaces must be clean, sound and free from contaminants that could inhibit adhesion, such as dust, dirt, oil, grease, laitance, and curing agents. Timber bases must be rigid, stable and adequately ventilated. They should support both static and dynamic loads without deflection and be covered with an appropriate intermediate layer.

## Guidance notes on suitable floor backgrounds

Prime the following backgrounds with one coat of PrimeMore Universal diluted 1:3 by volume with clean water (1 part PrimeMore Universal to 3 parts clean water).

Depending on the porosity of the background, additional diluted coats of PrimeMore Universal may be required.

All priming coats must be allowed to dry before applying additional coats and before applying the flooring compound.

### CEMENT:SAND SCREED

**Tile-Fixing (Porcelain & Ceramic):** Allow new screeds to dry for at least 3 weeks. For proprietary screeds, follow the manufacturer's recommendations for preparation and drying times.

**Fitting Resilient Floor Coverings:** Ensure the screed has an effective structural DPM and is dry ( $\leq 75\%$  RH). If a DPM is absent or ineffective, or residual construction moisture is present up to 98% RH, apply Kelmores DPM to the surface.

### HEATED CEMENT:SAND SCREED

New screeds must be commissioned from 3 weeks after screed installation and before work commences. Heat slowly at a maximum rate of  $5^{\circ}\text{C}$  per day until the maximum operating temperature is reached. Hold this temperature for 3 days before allowing the screed to cool to room temperature. For proprietary screeds, follow the manufacturer's recommendations for commissioning and preparation.

**Fitting Resilient Floor Coverings:** After commissioning, continue to run the underfloor heating until the screed is confirmed dry ( $\leq 75\%$  RH). Switch off underfloor heating 48 hours prior to commencing work.

### CONCRETE

#### Tile-Fixing (Porcelain, Ceramic, Natural Stone):

Allow new concrete to cure before being subjected to continuous air drying in good conditions for at least 6 weeks. Power floated concrete should be mechanically prepared to achieve a clean, sound, micro-textured, dust-free surface.

**Fitting Resilient Floor Coverings:** Ensure the concrete has an effective structural DPM and is dry ( $\leq 75\%$  RH). If a DPM is absent or ineffective, or residual construction moisture is present up to 98% RH, apply Kelmores DPM to the surface. Power floated concrete should be mechanically prepared to achieve a clean, sound, micro-textured, dust-free surface and be confirmed dry ( $\leq 75\%$  RH).

### PLYWOOD OVERLAY (CLASS 3)

**Fitting Resilient Floor Coverings:** Plywood must be a minimum 6mm thick and conditioned to the appropriate moisture content for the environment. Fix using screw nails, ring shank nails, or screws every 100mm at the sheet's perimeter and 150mm elsewhere.

### TILE BACKER BOARDS

Must be installed as instructed by the manufacturer and be securely fixed to rigid, suitable, prepared

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bases. Where boards have been installed on solid bases using tile adhesive, ensure the adhesive has fully set before commencing work. Please note, to prevent point loading, some proprietary boards will require a minimum compound thickness before installing certain floor coverings.

**Prime the following backgrounds with one neat, undiluted coat of PrimeMore Grip. Allow the primer to dry before applying the flooring compound.**

#### **FLOORING GRADE ASPHALT**

Must be hard, sound and firmly adhered.

#### **EPOXY DPM**

Must be a flooring grade that is compatible with cementitious products. Ensure it is hard, sound and firmly adhered.

#### **EXISTING CERAMIC, PORCELAIN, AND NATURAL STONE TILES**

Must be in good condition, free from contaminants and well bonded. Ensure the existing structure can take the additional weight.

**Fitting Resilient Floor Coverings:** If the existing tiles are fixed to a floor that does not contain an effective structural damp proof membrane, Kelmores DPM must be applied either directly to the surface of the prepared tiles or to a pre-smoothing layer of LevelMore Flex&Fibre.

#### **METAL (STEEL)**

Must be rigid, corrosion-free and clean.

**Prime calcium sulphate/anhydrite screeds with one neat, undiluted coat of PrimeMore CS. Allow the primer to dry before applying the flooring compound.**

#### **CALCIUM SULPHATE/ANHYDRITE SCREEDS**

All laitance and surface contaminants must be completely removed.

##### **Tile-Fixing (Porcelain, Ceramic, Natural Stone):**

The screed must be confirmed adequately dry ( $\leq 85\%$  RH).

**Resilient Floor Coverings:** The screed must be confirmed dry ( $\leq 75\%$  RH).

#### **HEATED CALCIUM SULPHATE/ANHYDRITE SCREEDS**

All laitance and surface contaminants must be completely removed. New heated screeds must be commissioned from 7 days after screed installation and before work commences. The screed should be heated slowly and in accordance with the recommendations of the screed manufacturer.

##### **Tile-Fixing (Porcelain, Ceramic, Natural Stone):**

The screed must be confirmed adequately dry ( $\leq 85\%$  RH).

**Resilient Floor Coverings:** After commissioning, continue to run the underfloor heating until the screed is confirmed dry ( $\leq 75\%$  RH). Switch off underfloor heating 48 hours prior to commencing work.

#### **ADDITIONAL INFORMATION**

**Moisture Tolerance:** LevelMore Flex&Fibre is suitable for use on damp subfloors, provided no surface water is present. It can also be used below damp proof membranes, and when used to pre-smooth textured subfloors, it enhances the coverage of Kelmores DPM.

**Underfloor Heating:** LevelMore Flex&Fibre can be used to encapsulate electric underfloor heating cables which have been adhered to prepared floors. For resilient floor coverings, apply LevelMore Flex&Fibre at the thickness recommended by the manufacturer to ensure the floor covering does not suffer heat damage.

After completing installations on backgrounds incorporating underfloor heating, the heating system should not be run for 10 days. Following this period, the floor temperature must be gradually raised to its optimal operating temperature.

**Impervious Backgrounds:** To provide an absorbent base for the application of adhesives, when fitting resilient floor coverings, LevelMore Flex&Fibre must be applied at a minimum thickness of 3mm.

**Timber Floors:** LevelMore Flex&Fibre can be used to smooth or level uneven timber floors prior to overlaying with plywood or tile backer boards. The timber floor must be rigid, adequately ventilated and free of all contaminants that could inhibit adhesion and be primed with PrimeMore Grip. Allow the primer to dry before applying the compound, and the compound must be allowed at least 3 hours to fully dry before fitting the sheets or boards.

**Multiple Layers:** Where possible, LevelMore Flex&Fibre should be applied at the desired thickness in a single application. If additional layers are needed, allow the previous layer to completely dry before priming with diluted PrimeMore Universal. Additional layers must not exceed the thickness of the previous layer.

**Wearing Coat:** When used as a wearing coat in domestic environments, LevelMore Flex&Fibre must be applied at a minimum thickness of 6mm. For use as a wearing coat in commercial environments, please contact Kelmores' technical department for advice.

**External Use:** Whilst still allowing the product to air cure, protect from rainfall and frost for at least 24 hours.

**Protein-Free:** LevelMore Flex&Fibre is suitable for use in biologically sensitive areas.

## Mixing

A 20kg bag of LevelMore Flex&Fibre must be mixed with 4.5 to 5.0 litres of clean, cold water. Within this range, the performance of the product is maintained whilst still offering the flexibility to adjust the water to obtain a desired consistency and flow. **Do not exceed 5 litres of water per 20kg of LevelMore Flex&Fibre.**

Pour the water into a clean bucket. Gradually add the powder whilst mixing thoroughly with an electric paddle mixer until a smooth, lump-free consistency is achieved. The compound is ready for use immediately after mixing.

## Application

Pour the mixed compound onto the prepared floor before using a trowel or rake to regulate the thickness and guide the product into the desired areas. If the product has been applied at a thickness that allows free movement of a spiked roller, using it whilst the product is still wet can further enhance the surface finish by removing any trapped air.

## Pumped Application

Mix according to the pump manufacturer's recommendations ensuring the correct water ratio is maintained. The mixed product should be smooth and fluid and have no surface separation or bleed. Flow checks should be performed regularly during the pumping process.

## Drying

Drying times will vary dependent on the porosity of the background, ambient temperature and humidity. When tested to the industry standard temperature of 20°C, LevelMore Flex&Fibre can be walked on after 90 minutes. Resilient floor coverings can be fitted after 3 hours, and porcelain, ceramic, and natural stone tiles can be fixed after 2 hours. Please be aware that higher temperatures and low humidity will shorten the drying time and lower temperatures and high humidity will extend the drying time.

## Bulking Out

LevelMore Flex&Fibre can be applied at a thickness of 2mm to 50mm in a single application. Where depths from 50mm to 75mm are required, LevelMore Flex&Fibre must be mixed with sharp sand at a ratio of 2:1 by weight (2 parts LevelMore Flex&Fibre to 1 part sharp sand). When bulking out, a 20kg bag of LevelMore Flex&Fibre should be mixed as normal with 5 litres of clean, cold water. After mixing, add 10kg of sharp sand and remix. The product is ready for use when the sand has been thoroughly combined into the compound.

## Coverage

Coverage will vary dependent on the texture of the background and the application thickness of the product. As a guide, a 20kg bag of LevelMore Flex&Fibre mixed with 5 litres of water will provide the following approximate coverage:

Application Thickness	2mm	3mm	5mm	10mm	20mm	50mm
Approximate Coverage	6.45m <sup>2</sup>	4.3m <sup>2</sup>	2.58m <sup>2</sup>	1.29m <sup>2</sup>	0.64m <sup>2</sup>	0.25m <sup>2</sup>

### NOTES:

- Cementitious products should only be used when both air and background temperatures are 5°C or higher. If the temperature falls below 5°C, the chemical reaction required for the product to set is hindered, dramatically slowing the curing process. Normal setting will only resume once temperatures rise. However, if temperatures drop below freezing before the product has fully set, the integrity and performance of the product will be compromised.
- In conditions above 30°C, the product's setting time will be significantly accelerated, which could make it difficult to work with. When use in higher temperatures is unavoidable, steps must be taken to keep the air, background, water, and products as cool as possible.

**CLEANING** All tools should be cleaned with water after use and before the product sets.

**HEALTH AND SAFETY** For detailed information, please refer to and follow the advice stated on the SDS (Safety Data Sheet) which can be accessed on our website – [www.kelmores.co.uk](http://www.kelmores.co.uk) or alternatively by contacting Kelmores Ltd.

**STORAGE AND SHELF LIFE** When stored in unopened packaging, off the ground, and in cool, dry conditions, this product has a shelf life of 12 months.

**BS 8203 & BS 5385** LevelMore Flex&Fibre should be used in conjunction with work carried out under the British Codes of Practice for the Installation of Resilient Floor Coverings, or for Wall and Floor Tiling.

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