

# 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 which 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. Providing superb flowing capabilities and dimensional stability, this protein free product sets with an outstanding surface finish and 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. Highlighting its true versatility, LevelMore Flex&Fibre is suitable for interior and exterior use and can also be installed as a 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 Maximum When bulked out with sharp sand	2mm 50mm 75mm
@20°C	Working time Walk on Tile after Fit resilient floor coverings after	20 minutes 90 minutes 2 hours 3 hours
Consumption per mm thickness		Approximately 1.55kg /m <sup>2</sup>
After 28 Days	Compressive Strength Flexural Strength	25 N/mm <sup>2</sup> 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 adequately ventilated and able to carry the additional static and dynamic load without deflection.

## 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:** When levelling or smoothing prior to tiling with porcelain, ceramic or natural stone tiles, newly installed screeds should be allowed to dry for a minimum of 3 weeks. *For preparation and drying times of proprietary cementitious screeds, follow the guidance of the manufacturer.*

When levelling or smoothing prior to fitting resilient floor coverings, screeds must have an effective structural damp proof membrane and be confirmed dry, no greater than 75% Relative Humidity (RH). If the screed does not contain an effective structural damp proof membrane, or residual construction moisture is present up to 98% RH, Kelmores DPM must be applied to the surface. LevelMore Flex&Fibre is moisture tolerant and can be used to pre-smooth screeds before applying the DPM.

**\*HEATED CEMENT:SAND SCREED:** New heated screeds must be commissioned from 3 weeks after screed installation and before work commences. The screed should be heated slowly at a maximum rate of

5°C per day until the maximum operating temperature (as recommended by the heating manufacturer) is reached. Hold this temperature for 3 days before allowing the screed to cool. *All proprietary cementitious screeds should be commissioned and prepared in accordance with the recommendations of the screed manufacturer.*

When fitting resilient floor coverings, ensure the moisture content of the screed is no greater than 75% Relative Humidity (RH) before levelling or smoothing.

Underfloor heating must be switched off 48 hours prior to levelling or smoothing.

**\*CONCRETE:** When levelling or smoothing prior to tiling with porcelain, ceramic or natural stone tiles, new concrete must be given time to cure before being allowed to continuously air dry in good conditions for a minimum of 6 weeks.

When levelling or smoothing prior to fitting resilient floor coverings, the concrete must have an effective structural damp proof membrane and be confirmed dry, no greater than 75% Relative Humidity (RH). If the concrete does not contain an effective structural damp proof membrane, or residual construction moisture is present up to 98% RH, Kelmores DPM must be applied to the surface. LevelMore Flex&Fibre is moisture tolerant and can be used to pre-smooth concrete before applying the DPM.

Power floated concrete should be mechanically prepared by suitable means to provide a clean, sound, micro-textured, dust free surface.

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**PLYWOOD OVERLAY (CLASS 3):** Ensure the subfloor is rigid, flat, dry and adequately ventilated. The plywood must be conditioned to the appropriate moisture content for the environment. When levelling or smoothing prior to fitting resilient floor coverings, the plywood overlay must be a minimum 6mm thick and screw fixed at 100mm centres around the perimeter of the sheet and 150mm centres elsewhere. When levelling or smoothing prior to tiling with porcelain, ceramic or natural stone tiles, the plywood overlay must be a minimum 15mm thick and screw fixed at a maximum 300mm centres.

**\*TILE BACKER BOARDS:** Ensure the boards are installed as instructed by the manufacturer and that they are securely fixed to suitable, rigid, prepared bases. Where the boards have been installed on solid bases using tile adhesive, ensure the adhesive has fully set before applying the product. Please note that some proprietary boards can be susceptible to point loading and will require the compound to be applied at a minimum thickness before installing some 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. When fitting resilient flooring, LevelMore Flex&Fibre should be applied with a minimum thickness of 3mm to provide an absorbent base for the application of adhesives.

**EPOXY DPM:** Must be a flooring grade that is compatible with cementitious products. Ensure it is hard, sound and firmly adhered. When fitting resilient flooring, LevelMore Flex&Fibre should be applied with a minimum thickness of 3mm to provide an absorbent base for the application of adhesives.

**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.

When fitting resilient flooring, LevelMore Flex&Fibre should be applied with a minimum thickness of 3mm to provide an absorbent base for the application of adhesives. 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, clean and free from contaminants that could inhibit adhesion, including oil and grease. When fitting resilient flooring, LevelMore Flex&Fibre should be applied with a minimum thickness of 3mm to provide an absorbent base for the application of adhesives.

**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. The screed must be confirmed adequately dry, no greater than 85% Relative Humidity (RH) when levelling or smoothing prior to tiling with porcelain, ceramic or natural stone tiles, and no greater than 75% RH when levelling or smoothing prior to fitting resilient floor coverings.

**HEATED CALCIUM SULPHATE/ANHYDRITE SCREEDS:** All laitance and surface contaminants must be completely removed. New heated screeds must be commissioned before commencing work. This can be started from 7 days after the screed has been installed and heat should be introduced slowly and in accordance with the recommendations of the screed manufacturer. When levelling or smoothing prior to tiling with porcelain, ceramic or natural stone tiles, ensure the moisture content of the screed is no greater than 85% Relative Humidity (RH), and no greater than 75% RH when levelling or smoothing prior to fitting resilient floor coverings.

Underfloor heating must be switched off 48 hours prior to levelling or smoothing.

## SPECIFIC PRODUCT INFORMATION

- LevelMore Flex&Fibre is moisture tolerant, making it suitable for use on damp subfloors providing no surface water is present and for use below damp proof membranes. When the product is used to pre-smooth subfloors, the subsequent application of Kelmores DPM will have improved coverage.
- LevelMore Flex&Fibre can be used to encapsulate electric underfloor heating cables. Before the cables or mats are adhered to the floor, ensure that the background has been prepared. Where resilient floor coverings are to be fitted, LevelMore Flex&Fibre must be applied at a thickness as 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.
- 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 one neat, undiluted coat of PrimeMore Grip. The primer must be dry before applying the compound, and the compound must be allowed a minimum of 3 hours to fully dry before fitting the sheets or boards.
- Where possible, LevelMore Flex&Fibre should be applied at the desired thickness in a single application. If additional coats are required, allow the previous coat to completely dry before priming with PrimeMore Universal diluted 1:3 by volume with clean water. Additional coats must not exceed the thickness of the previous coat.
- When used as a wearing coat, LevelMore Flex&Fibre must be applied at a minimum thickness of 5mm.
- When used externally, whilst still allowing the product to air cure, LevelMore Flex&Fibre must be protected from rainfall and frost for at least 24 hours.
- LevelMore Flex&Fibre is protein free, making it 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 measured 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

LevelMore Flex&Fibre can be applied at a thickness of 2mm to 50mm in a single 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. Whilst the product is still wet, the use of a \*spiked roller can further enhance the surface finish by removing any trapped air.

\*The use of a spiked roller is only recommended when the product has been applied at a thickness that will allow the roller to freely roll through the compound.

## Pumped Application

LevelMore Flex&Fibre can be pump applied using appropriate pumping equipment.

## 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 re-mix. 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:** All cementitious flooring compounds should only be used when the temperature (air and background) is 5°C or above. If temperatures drop below 5°C then the chemical reaction required for cement to set is impeded, dramatically slowing the setting process. This will only return to normal when temperatures rise. Additionally, if the temperatures drop to below freezing before the compound has set, then the integrity and performance of the product will be compromised.

Where temperatures are in excess of 30°C, the set time of the product will be accelerated significantly, potentially making it difficult to use. When work must be undertaken in higher temperatures, every effort should be made to ensure the temperature of the air, background, water and products are kept 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:** LevelMore Flex&Fibre must be stored in unopened packaging, off the ground, and in cool, dry conditions. If stored in this way, the shelf life of this product is 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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