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# LA CHAPE XXs<sup>®</sup>

READY-TO-USE & FIBRE-REINFORCED  
LIGHTWEIGHT CONCRETE

Thickness from

**1** CM  
(3/8 in)



# PRESENTATION

**LA CHAPE XXs®** is a ready-to-use bagged lightweight concrete, lightened by virgin, expanded polystyrene beads with controlled grain size and coated with E.I.A. additive (2-3 mm - 1/8 in diameter). **LA CHAPE XXs®** contains fibres and has good mechanical properties for particular surfaces.

## Application

The screed **LA CHAPE XXs®** is intended to lighten the structures (it is twice lighter than a traditional screed) and for the thermal and acoustic insulation of different types of supports, in buildings or individual houses, for new construction or renovation works. It is suitable to receive the laying of other screeds, levelling thermal insulating base screeds, gradient formation and impact noise insulation.

## Advantages

- Direct application of ceramic tiles after 24 hours, without smoothing mortar.
- Lightweight: 1200 kg/m<sup>3</sup> (74.91 lb/ft<sup>3</sup>).
- Fibrous = suppression of mesh splitting.
- Simple and easy application.
- Compatible with all flooring (see installation of flooring table).
- It can be pumped over long distances and heights.

## Technical details

- **Composition:** Lightweight aggregate POLITERM® BLU FEIN + Hydraulic binder (cement), special aggregate, fibres and additives.
- **Density:** 1200 kg/m<sup>3</sup> (74.91 lb/ft<sup>3</sup>).
- **Impact sound insulation:** 17 dB with 5 cm thickness (2 in) (estimate).
- **Minimum thickness:** 1 cm (3/8 in) on concrete support, 2 cm (3/4 in) on wooden support.
- **Maximum thickness:** 15 cm (5 29/32 in).
- **Application temperature:** + 5 °C and + 30 °C (+41 F and + 86 F).
- **Walkability:** 12 hours.
- **Period before flooring installation:** 24 hours for ceramic flooring, 36 hours for elastic flooring, 3 days for floating parquet and laminate flooring.

NB: those waiting times are an example with a temperature of +20 °C (65 F) and a humidity of 50%. They may change depending on drying conditions (temperature and humidity).

## Preparation and storage

**Ready-to-use bag:** 23-litre (6.07 gallons).

**Weight:** 26.5 kg (58.42 lb).

**Palletization:** 50 bags.

**Storage:** maximum 12 months if conveniently stored on pallet, in a dry and fresh place, protected from frost, water and direct sunlight.

## Consumption / Yield

12 kg/m<sup>2</sup>/cm of thickness.

For a thickness of 3 cm (1 3/16 in), 1 bag = 0.76 m<sup>2</sup> (8.18 ft<sup>2</sup>).

## Application

### Suitable supports

Concrete flooring, concrete flagstone, cement screed, old tiles, natural stone and granite flagstone, precast, underfloor forms.

### Floating screeds

Anhydrite screed, lightweight concrete or mortar, old tile, wooden floor, regular parquet, underfloor forms.

### Suitable flooring <sup>(1)</sup>

Tiles, laminate and floating parquet with a thin acoustic underlay, textile flooring, glued parquet.

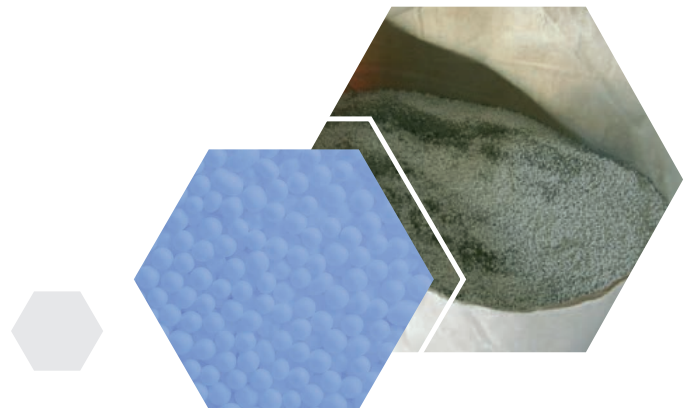
<sup>(1)</sup> The installation can be done if the surface is smooth, thin and steady. Otherwise, a self-smoothing is needed first.

## Warnings

**LA CHAPE XXs®** must be covered by a final installation (indoor or outdoor).

### Do not use it:

- On capillary lifting ground.
- On unstable or flexible old flooring.
- On a heating floor.
- On an exterior ground with no waterproof protection.
- On a wooden floor with u-bend or gutter.
- On a frosted / defrosting substrate, hot, wet, under the sunlight or under the wind substrate.



# PREPARATION



## Mixing equipment

Cement rotating mixer or electric mixer with a speed 300 turns/minute.

## Cement mixer preparation

- Pour 4.0 to 4.5 litres of water (1.05 to 1.19 gallons) into a rotating cement mixer.
- Pour in the entire bag of **LA CHAPE XXs®**.
- Allow it to mix for 3 to 5 minutes.
- Mixture must be homogeneous, and grey-coloured.
- To obtain a homogeneous mixture, do not fill more than 60% of the volume of cement mixer.
- On the first trowel, the cement mixer will be dry and the product will tend to stick to the walls. Allow mixing to continue for a bit, be careful to not add water needlessly.

## Pump preparation

- Prior to the first mix, feed a mixture of water + cement into the pipe.
- Pour 4.0 to 4.5 litres of water (1.05 to 1.19 gallons) into an operating mixer.
- Pour in the entire bag of **LA CHAPE XXs®** as permitted by pump capacity.

## Usage warning for preparation of LA CHAPE XXs® concrete

- Follow water quantities.
- Never rewet lightweight concrete after mixing.
- Mixture must not be liquid but compact and frothy.
- No aggregates or adjuvants can be added in your screed.
- Application temperature: + 5 °C and + 30 °C (+41 F and + 86 F).
- Do not add any other products or components.
- Do not use on an important humid substrate.
- Make sure there is enough water but not over 4.5 litres per bag.



# IMPLEMENTATION

## Preparation of substrate

Flooring and substrate must be cleaned of any scrap, waste, plastering sheets and any other materials left from work by one of the construction trades. In case of humidity lifting, use an adapted primer.

## Age of the substrate

	Residential and commercial usage	
	Attached installation	Non attached or floating installation
Median strip flagstone	1 month	2 weeks
Concrete flooring	6 months	1 month
Underfloor forms	24 hours	24 hours

## Application

### 1/ Substrate separation

For separation, place a band of resilient material with minimum thickness of 3 mm (1/8 in), except 5 mm (1/4 in) for heating floors, around room and or any coming in contact with the lightweight screed (walls, pipes, window or door frames, etc...).

This will prevent acoustic transmission and cracking.

The band must go from the substrate and be higher than 2 cm (3/4 in) over the final surface before being taken off at the end of the job.

### 2/ Non attached installation (separated from substrate)

Place micro-perforated PE (polyethylene) film or a thin acoustic underlay to improve substrate acoustics by reducing impact sounds. No other interposition products, including plates, rolls or loose are acceptable (EPS, XEPS, fibreglass, etc.). The PE film or thin acoustic underlay must completely follow and cohere to the substrate as well as at corners so that there is no air (space) between the film/underlay and the substrate. If a thin acoustic underlay is installed, mortar thickness must not be less than 5 cm (2 in) for a class SC1 thin acoustic underlay and 7 cm (2 3/4 in) pour a class SC2 underlay.

### 3/ Attached installation (concrete substrate only)

After the cleaning of any scrap, waste, plastering sheets and any other materials left from work by one of the construction trades, the surface must be rough by suitable mechanical equipment: sanding, shot-blasting then been vacuumed.

If any scrape cleaning product has been applied on the substrate, remove it by shot-blasting. The substrate must be lightly wet the day before the application then again the day of the application then treated by an attached mixture. In case of old floor and very absorbent, wet the substrate to avoid a dehydration to fast. Use an adhesion mixture.

On the humid substrate, use a broom to apply the mixture\* before the implementation of the screed (the mixture must be wet and humid) when you spread the screed. You must use an adapted adhesion primer over the surface before.

### 4/ Guide rail installation

Use dabs of concrete to install your guide rails. If necessary, use small dabs to prevent excessive reduction of the thickness of the lightweight concrete.

### 5/ Mesh positioning

For substrate flexing, lay a 50 x 50 mm (2 x 2 in) soldered mesh panel. Do not place upper dimensions on the surface to be worked, making sure that plates overlap by at least one square.

Place wedges or concrete dabs under the mesh so that it becomes well set in the middle of the lightweight concrete (poorly installed mesh can create problems).

### 6/ Floor heating

Do not cover underfloor heating with LA CHAPE XXs® lightweight concrete. Such application would prevent optimal heat distribution.

### 7/ Subdivision seals

- The subdivision must be done through 2/3 of the thickness after the tiling and before the seal filling.
- Separated or floating installation: every 40 m<sup>2</sup> (430 ft<sup>2</sup>) with no linear 8 m (26 ft) exceeding.
- Attached installation: every 60 m<sup>2</sup> (645 ft<sup>2</sup>) with no linear 8 m (26 ft) exceeding.
- Distansion seals: reproduce the existing distansion seals with the adapted section.

Any porous component will be wet before the lightweight screed casting for a perfect adhesion.

# IMPLEMENTATION

## Application of LA CHAPE XXs® lightweight concrete

After the LA CHAPE XXs® mixing as explained before, the screed must be homogeneous and grey. Spread the screed with a minimum thickness of 1 cm (3/8 in).

The maximum thickness is 15 cm (6 in).

- Apply lightweight concrete using appropriate tools (rake, shovel, ruler, etc...).
- Check that the concrete is well spread on the PE film or acoustic underlay.
- Pull a ruler across the surface and check thickness of application.
- Use a cement finishing trowel for a flat, smooth surface.
- Do not use a float.

If the work must be stopped for an hour or more, stop the application on a sharp rim.

Then use an adhesion mixture on the rim to continue the application.

## Usage warning for application

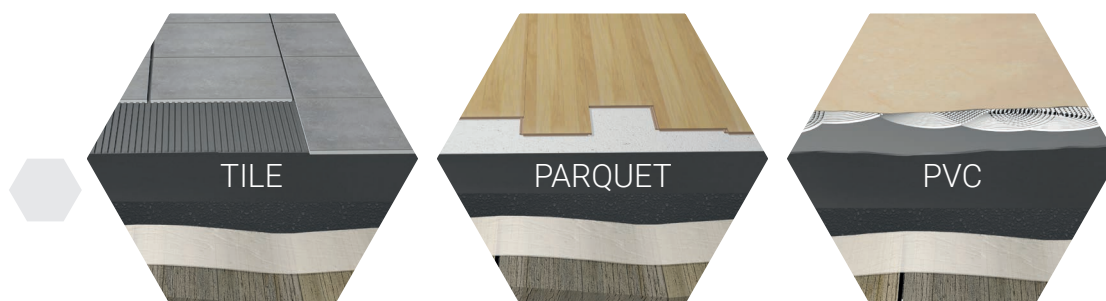
- Concrete must be used within 30 minutes of mixing.
- Spread the concrete only once or end at a separation joint.

## Installation of flooring

Surface finishing depends on the final covering used. Any kind of flooring is possible according to the best industry practices and the recommendations made in the following table. Tile bonding is to be done with C2, C2-S1 or C2-S2 adhesive concrete, with "CSTB certified - QB" certification, and joints must be flexible.

**Covering period** (for a thickness of 5 cm - 2 in):

- **Tiles:** 24 hours.
- **Smoothing:** 24 hours.
- **Textile flooring:** 5 days.
- **Elastic flooring:** 5 days.
- **Laminate and floating parquet:** 3 days.
- **Glued parquet:** 7 days.



## Instructions

- Allow to dry sheltered from drafts, if needed, protect temporarily with PE film for 24 hours. Also protect from sunlight and high temperatures and/or rain during setting.
- Work must be planned so that flooring is installed within no more than 28 days following pouring of lightweight concrete.
- Lightweight concrete is not to be left uncovered, and must always be covered with flooring.
- If several trades are required to work on top of the lightweight concrete, it is essential that concrete is protected by creating a circulation corridor with planks or by applying grouting to the concrete surface.
- In the case of infrequent passage, manual sweeping will remove all surface defects.
- Surface sweeping of concrete is mandatory prior to application of coatings (smoothing) to prepare flooring and installation of final floor covering.

## Installation and attachment of wall partitions

- Wall partition can be done directly on the substrate.

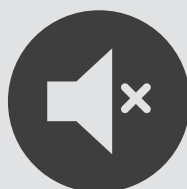
360° INSULATION



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