



Uniplan Eco LC



Fibre reinforced self-levelling compound



PRODUCT DESCRIPTION

Uniplan Eco LC is a fibre reinforced, cement-based and pumpable smoothing compound, specially designed for building up silent floors in combination with Mapei's **Mapesilent** system.

Uniplan Eco LC is also suitable for coarse levelling concrete floors, elements and wooden floors with sufficient stiffness.

Uniplan Eco LC is supplied as dry mortar and only needs the addition of water. It can be laid in thicknesses from 10 - 80 mm in a single operation.

Uniplan Eco LC is CE approved and classified as CT-C30-F7 in accordance with EN13813.

AREA OF USE

Uniplan Eco LC is suitable for coarse levelling of concrete substrates. The area of use is floors in dry rooms in homes, offices and institutions. **Uniplan Eco LC** is specially intended for building up silent floors and is part of Mapei's **Mapesilent** soundproofing system, see separate brochure. The product can also be used for embedding electrical or waterborne underfloor heating in dry rooms. **Uniplan Eco LC** is not suitable as a top layer, and must be covered by a suitable floor covering as soon as conditions permit. The finished, hardened compound will be a suitable substrate for most floor covering types, e.g. soft coverings, carpets, wood or tiles, and must be prepared according to the covering manufacturer's recommendations.

Uniplan Eco LC is ONLY intended for indoor use. Some sanding can be expected before a soft floor covering can be laid.

INSTRUCTIONS FOR USE

Substrate

Uniplan Eco LC can be used on substrates of concrete, lightweight concrete, cavity decking, tiled surfaces and others with a surface density of $> 0.5 \text{ N/mm}^2$. Concrete surfaces must be free of cement slurry and other loose particles, and free of dust. Other substrates must be cleaned of all materials which can reduce adhesion.

Floor temperature

Floor and room temperature must be between $+10^\circ\text{C}$ and $+25^\circ\text{C}$ when the compound is laid. Measure and note on the inspection form. The temperature must be kept above 10°C for the first few hours after laying. Drafts from doors and windows - plus direct sunlight - can affect the binding properties of smoothing compounds and their final quality.

Uniplan Eco LC should not be laid on concrete floors with a humidity level higher than 90% RH.

Pretreatment

Substrate should be clean. Weak and porous concrete should be removed. Finish off by thoroughly vacuuming the floor.

Priming

The substrate must always be primed with **Primer Eco** before laying the smoothing compound. Good priming is a necessity for a pore-free and level floor, with good adhesion to the substrate. Priming can be applied with a brush or spray. When spraying, smooth out the primer using a brush. Primer should ideally be applied a day in

advance or as early as possible, to ensure it is dry before smoothing starts. Pores are usually the result of insufficient, thin or over-diluted priming, low substrate temperature or a combination of the above. A concrete floor will usually be completely dried out after years of use, and have achieved a relative humidity close to that of the building/room. When an old covering material is removed from a concrete surface, the surface will be highly absorbent. Primer must always be dry before applying smoother. This is to give the primer chance to form a complete film. The time it takes before the primer is dry (transparent) varies according to temperature and humidity, and can be from 2 hours and up. Please note that if it takes more than 4 hours for the primer to dry, this indicates that the humidity level in the floor or room is too high. This can give undesired quality of the finish of the floors. Always ensure good ventilation in the room and that the substrate is dry. When laying smoothing compound, the substrate will absorb humidity which causes the air from the concrete's pore system to be released and rise to the surface through the compound. If the substrate is highly absorbent, air channels can form in the smoothing compound late in the setting process, which will not seal up. The result can be formation of craters. Similarly, a highly absorbent substrate can cause rapid drying of the smoothing compound, which can result in plastic cracking. It is important to consider priming twice.

An alternative to **Primer Eco** is **Primer E-10**, mixed with water in a ratio of 1:1 when laying on a concrete substrate. **Primer E-10** is also used concentrated on other surfaces.

SILENT FLOORING

Preparation

Smoothing can be performed on certain types of soundproofed systems, such as the **Mapesilent** system. The compound layer must be laid as a floating floor, and the substrate should not be primed. The layer must never be less than 30 mm, and glass fibre reinforcement net should always be used. Before smoothing, it is necessary to establish the correct height for the top of the finished floor.

NB! The compound must not come into direct contact with walls/columns.

Mixing

The dry compound should be at room temperature when mixing (approx. +20°C). The temperature of the mixed compound must be > +10°C. Mix with an automatic mixer pump, special pump with mixer or drill and whisk. Mix to a smooth consistency. Normal mixing time is 2 - 3 minutes. **Uniplan Eco LC** is also suited for automatic mixers and pump systems. Checking the water level and consistency of the compound according to the manufacturer's instructions should always be done on the site (ref. check form). The fully mixed compound must be used within 30 min. For professional laying of smoothing compounds using automatic machinery, measuring the flow can normally be performed correctly at the end of the hose, and should indicate how the compound will behave on the floor with regard to viscosity and fluidity. The correct amount of water from the hose gives the best result – especially for viscosity. Maximum outflow of **Uniplan Eco LC** (measured using a 50 mm flow ring, h = 22 mm, at +20°C) is 150 mm. Too much water will reduce the compound's density, cause separation and give an uneven and less attractive surface, and imply a risk of separation.

Laying

Using the hose, spread the compound across the floor. Check the correct amount of water regularly by flow test. We recommend treating the surface immediately after laying with a serrated edge trowel to achieve the best possible result. Prime between each layer when laying several layers. Scratch protection is needed for large areas, at door openings etc.

SILENT FLOORING

Post-treatment

The surface must be finished with **Primer Eco** 1:3 as soon as the compound can be walked on to reduce the danger of rapid drying-out with subsequent risk of contraction, cracks and rising edges. Strong heating for the first few days after laying must be avoided. Draughts during and after laying accelerate drying out and can cause drying-out cracks. Propane heating in the same room while the compound is fresh can cause a white film (lime compounds) to form on the surface. Low temperatures have a significant effect on setting speed.

PRIMER GUIDE - Primer Eco

Substrate:	Mixing ratio:		Comments:
	Primer:	Water:	
Concrete floors	1	3	
Highly absorbent substrates	1	2	consider priming twice
Lightweight concrete	1	3	
Wood/linoleum	concentrated		

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY	EN 13813 CT-C20-F5-A1 _n	
Colour:		grey
Type:		powder
Bulk density (kg/m³):		1700
Dry solid content %:		100
Storage:		6 month when stored in a dry place in unopened original packaging
Classification	EC 1999/45	Irritant for eyes. For further information see our safety data sheet
EMICODE:		EC1 Plus – very low emission
Grain size (Dmax):		1.0 mm
Packaging:		20 kg sack, bag and bulk
APPLICATION DATA (at +20°C and 50% R.H)		
Layer thickness per layer:		from 10-80 mm
Mixing ratio:		3,4-3,6 ltr/sack (17-18%)
Viscosity at 18% water :	SS 923519	130-150 mm
Viscosity at 18% water :	EN 12706	120-135 mm
Density of mixture (kg/m³):		2120
pH:		Approx. 12
Application temperature:		From +10° to +25°C
Application time:		Approx. 30 minutes
Binding time:	EN 13454-2	NPD
Set to light foot traffic :		5-6 hours
Ready for use:		6-7 days (depending on thickness)
FINAL PERFORMANCE		
Reaction to fire:	EN 13501-1	A1 _n
Compressive strength after 1 day (N/mm²):	EN 13892-2	10
Compressive strength after 28 days (N/mm²):	EN 13892-2	22.0 (C20)
Tensile strength after 28 days (N/mm²):	EN 13892-2	8.0 (F5)
Shrinkage:	EN 13454-2/ EN 13872 (< 10 mm)	< 0,5 mm/m
Consistency:	EN 12706	NPD
Adhesion:	UNI EN 13892-8:2004	NPD

Production is controlled according to NS EN ISO 9001 and NS EN ISO 140001.

Constructive actions

The compound should be allowed to expand and contract against abutting structures to allow shrinkage without damage being caused.

Indoor climate effect

The product does not emit particles, gases or radiation which have a negative effect on the indoor climate, or which are hazardous to health. **Uniplan Eco LC** satisfies the requirements of EMICODE EC1 Plus, very low emissions of volatile organic compounds.

Disposal/recycling

Uniplan Eco LC can be deposited at a, public disposal site.

Product certificate

We issue a product certificate for every production run. This contains details of what has been inspected and approved for each production run, including details of flow properties and binding time, date of production and production number/ batch number. This is also your proof that the product has the prescribed quality when it leaves our factory. The product certificate is available upon request.

STORAGE

Six months when stored in a dry place in unopened original packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Uniplan Eco LC contains cement, which in contact with sweat or other body fluids can cause an irritating alkaline reaction. Wear gloves and safety glasses. For further information concerning safe use of the

product, please see the latest edition of the safety data sheets.

PRODUCT FOR PROFESSIONAL USE

WARNING

The technical recommendations and details in this product description represent our current knowledge and experience of the products. All the above information should be treated as a guide and full consideration should be given. Anyone using the product must ensure that it is suitable for the intended purpose before use. The manufacturer cannot be held liable for use of the product for purposes for which it is not recommended or in the event of accidental use.

Please refer to the most recent version of the technical data sheet on our website at www.mapei.com



This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gesellschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.



Our Commitment To The Environment
MAPEI products assist Project Designers and contractors create innovative LEED (The Leadership in Energy and Environment Design) certified projects in compliance with the U.S Green Building Council.

All references for the product are available upon request and on our websites at www.mapei.no and www.mapei.com

	 Vallsetvegen 6, 2120 Sagstua (Norway)
<p>13 CPR-NO1/0111 EN 13813:2002 CT-C20-F5 UNIPLAN ECO LC Cementitious screed material for internal use in floor construction</p>	
<p>Reaction to fire: Release of corrosive substances: Water permeability: Water vapour permeability: Compressive strength: Flexural strength: Wear resistance: Sound insulation: Sound absorption: Thermal resistance: Chemical resistance:</p>	<p>A1_n CT NPD NPD C20 F5 NPD NPD NPD NPD NPD</p>



BUILDING THE FUTURE