



# Conplan Eco



## Self-levelling smoothing compound



### PRODUKTBESKRIVELSE

**Conplan Eco** is a cement-based, pumpable, self-levelling smoothing compound for concrete floors.

**Conplan Eco** is supplied as dry mortar and only needs the addition of water. It can be laid in thicknesses of from 3 - 25 mm in a single operation.

**Conplan Eco** has EPD approval, is CE approved and classified as CT-C30-F7 in accordance with EN13813.

### AREA OF USE

**Conplan Eco** is intended for levelling a concrete substrate. It can be used for floors in homes, offices and institutions. **Conplan Eco** is not intended as a top layer, and must be covered by a suitable floor covering as soon as conditions allow. The finished, hardened compound will be a suitable substrate for most types of covering, e.g. linoleum, tiles, wood and must be prepared in accordance with the covering manufacturer's recommendations.

**Conplan Eco** is ONLY intended for indoor use.

### INSTRUCTIONS FOR USE

#### Substrate

**Conplan Eco** 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  $10^\circ\text{C}$  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.

**Conplan Eco** should not be laid on concrete floors with relative humidity higher than 90% RH.

### Priming

The substrate must always be primed with **Primer Eco** before laying the smoothing compound. Good priming is essential for a non-porous and level floor, which adheres well to the substrate. Use a brush or spray to apply primer. Use a brush to spread the primer evenly if spraying. Prime one day in advance or as early as possible to ensure the primer is dry before laying. Pores are usually due to insufficient application, too thin or diluted priming, low temperature in the substrate or a combination of all these. After many years of use, a concrete substrate will be completely dried out, and have 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.

The primer must always be dry before laying the compound. This is to allow the primer to form a sealing film. The time it takes for the primer to dry (transparent) varies according to temperature and air humidity from 2 hours and up. Please note that if it takes more than 4 hours for the primer to dry, this can indicate that the humidity level in the floor or room is too high. This can

## 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		

give undesired quality of the finished floor. 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.

### 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. **Conplan Eco** is also suited for automatic mixers and pump systems. Checking the water level and consistence of the compound according to the manufacturer's instructions should always be done on the site (ref. check form). The fully mixed compounds must be used within 30 min. For professional laying of smoothing compound 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 **Conplan Eco** (measured using a 50 mm flow ring, h = 22 mm, at +20 °C) is 165 mm. Too much water will reduce the compound's density, cause separation and give an uneven, unattractive surface.

### Laying

Spread the compound from the hose across the floor. Check the correct amount of water regularly by flow test. We recommend going over 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. The compound can also be laid for smaller

areas. If a layer thicker than 25 mm is required, apply further layers in separate operations.

In order to obtain the best result we suggest the following maximum length of application:

- for applications up to 30 mm max 10 meters.
- for applications over 30 mm max 8 meters.

### Constructive actions

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

### FACTORS WHICH AFFECT SMOOTHING COMPOUNDS

Excess water causes reduced density and risk of separation. Draughts during and after laying 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.

### Effect on indoor climate

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

### Disposal/recycling

**Conplan Eco** 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, details of flow properties and binding time, including 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

9 months when stored in a dry place in unopened original packaging. The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY	EN 13813 CT-C30-F7-A2 <sub>FL</sub> -S1	
Colour:	grey	
Type:	powder	
Bulk density (kg/m³):	1700	
Dry solid content %:	100	
EMICODE:	EC1 Plus – very low emission	
Grain size (Dmax):	0,5 mm	
APPLICATION DATA (at +20 °C and 50% R.H)		
Layer thickness per layer:	from 3-25 mm	
Mixing ratio:	3.8 – 4.1 litres/sack (19 – 20,5%)	
Flow for 4.1 L water:	SS 923519	155-165 mm
Flow for 4.1 L water:	EN 12706	135-145 mm
Density of mixture (kg/m³):	2050	
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:	4-5 hours	
Ready for use:	2-5 days	
FINAL PERFORMANCE		
Reaction to fire:	EN 13501-1	A2 <sub>FL</sub> -S1
Compressive strength after 1 day (N/mm²):	EN 13892-2	12
Compressive strength after 28 days (N/mm²):	EN 13892-2	30 (C30)
Tensile strength after 28 days (N/mm²):	EN 13892-2	7 (F7)
pH after 24 hours:	≤ 10	
pH after 3 hours:	≤ 9	
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 our EN ISO 9001 and EN ISO 14001

## **SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION**

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website [www.mapei.no](http://www.mapei.no)

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.no](http://www.mapei.no)

## **LEGAL NOTICE**

*The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation. The most up-to-date TDS can be downloaded from our website [www.mapei.no](http://www.mapei.no)*

**ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.**



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

**All relevant references  
for the product are available  
upon request and from  
[www.mapei.no](http://www.mapei.no)**