MAPEI

GEV-EMICODE EC 1 PLUS very low emission

Uniplan Eco TDR

CT LEVELLING COMPOUNDS C40-F10 F MAPEI IN COMPLIANCE WITH EUROPEAN STANDARDS EN 13813

CE EN 13813

Fast-drying, fibre-reinforced, dust-reduced, self-levelling, cement-based mortar for floors

PRODUCT DESCRIPTION

Uniplan Eco TDR is a dust reducing, fibre reinforced, cement based compound for levelling of concrete and wooden floors, where early covering is required.
Uniplan Eco TDR appears as a dry mortar, and requires only the addition of water. The product can be applied in thicknesses from 5-50 mm in one operation.
Uniplan Eco TDR is CE-labelled and classified as CT-C40-F10 according to EN13813.

AREA OF APPLICATION

Uniplan Eco TDR is intended for levelling of concrete surfaces and floors with sufficient rigidity. Areas of application are floors in residential buildings, offices, institutions, and light industrial buildings where there is a need for early coating after construction.
Uniplan Eco TDR can be used to enclose electrical floor heating or hydronic heating in dry and wet rooms. In wet rooms, a membrane over the compound should always be applied.
Uniplan Eco TDR is intended for indoor use ONLY.

INSTRUCTIONS FOR APPLICATION

Substrates

Uniplan Eco TDR can be used on concrete surfaces, light concrete, hollow-core concrete slabs, tile surfaces, and other surfaces with a surface tension of > 1.0 N/mm^2. Concrete surfaces must be clean and free from dust, laitance, and other contaminants.
Other surfaces must be cleaned and any contamination present that may reduce adhesion must be removed.

Floor Temperature

Floor and room temperature should be between +10°C and +25°C when the compound is applied. The temperature must be kept above +10°C during the first hours after application. Draft from doors and windows, as well as direct sunlight may change the bonding properties of levelling compounds and affect the final quality.
Uniplan Eco TDR should not be applied to concrete floors where the humidity is above 90%.

Priming

The substrate must always be primed with **Primer Eco** before the levelling compound is applied. A good primer is essential for an air-void-free and level floor with good adhesion to the substrate.
The primer is applied by brush or spray. After spraying, the primer is smoothed out with a brush. The primer must be applied the day before, prior to the application of the levelling compound.

Air voids (pinholes) are usually caused by too little, thin or diluted primer, too low temperature in the substrate (or a combination of these).
Normally a concrete substrate will after many years have dried out completely, and achieved a relative humidity close to the humidity of the building or room.
When the dried out concrete surface has been mechanically abraded, the surface will be highly absorbent.
The primer should always be dry before application is initiated. The primer will then have the opportunity to form a dense “film” on the surface.
The time required for the primer to dry (and become

transparent), varies with temperature and humidity, and this normally takes 2 hours or more. Note that if more than 4 hours is required for the the primer to dry, this is a sign of high moisture in the floor or room. Make sure the room is well ventilated and that the substrate is dry.
In connection with the application of the compound, moisture is transferred from the substrate so that air from concrete pores is released and migrates to the surface through the compound. If the surface is very absorbent, vents that will not flow together may be formed in the compound during solidification. This can result in crater formation.
This will also happen with a highly absorbent substrate. Rapid drying of the compound can result in cracking due to shrinkage. Therefore consider priming the surface twice if required.

Mixing
The dry compound should be at room temperature when mixing (approx. +20°C). The temperature of the finished compound must be > +10°C. The levelling compound is mixed with an automatic mixing pump, a special pump mixer, or a variable speed electric drill.
Mix until you have a lump-free compound. Normal mixing time is 2-3 minutes. Water requirement per 20 kg bag is 3.6 litres. Too much water will reduce the strength, causing separation, and will result in a rougher and uglier surface with increased risk of separation.

Laying of the compound
The compound should be transferred to the floor immediately after mixing.
Ensure the correct amount of water is used, especially whilst pumping, and regularly test the material using a flow ring test.
For best results it is recommended to smooth the surface with a trowel, immediately after application.
If a further layer is necessary, allow the product to dry and ensure that a primer is applied. Accelerated hydration caused by draughts can result in surface cracks. Propane burners used in the same room may create a white residue on top of the compound.

Finishing
Uniplan Eco TDR is not intended as a wearing screed and must be covered by a suitable coating as soon as conditions permit.
If the product will be left uncovered for more than three days after application, the surface must be protected with a suitable membrane curing. The cured compound will function as a finished floor for coverings like linoleum, hardwood or tiles, and must be prepared according to the producers instructions.
Low temperatures can affect strength and drying times.

Effects on indoor environment
The product is considered to not emit particles, gases, or radiation resulting in a negative impact on indoor environment or occupational health. **Uniplan Eco TDR** meets the EMICODE EC1 R Plus requirements for very low emissions of volatile organic compounds.

Disposal / recycling
Uniplan Eco TDR should be send to an authorised disposal plant.

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
Shelf life 6 months when stored dry in original unopened packaging.
The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH) - All. XVII, item 47.

PRIMER GUIDE - Primer Eco

Substates	Mixing ratio		Comment
	Primer	Water	
Concrete Floor:	1	3	
Highly absorbent surfaces:	1	2	Consider priming two times
Lightweight concrete:	1	3	
Wood / Linoleum:	concentrated		

TECHNICAL DATA (typical values) In compliance with:	– EN 13813 CT-C40-F10-F
PRODUCT IDENTITY	
Colour:	grey
Type:	powder
Density (kg/m^3):	1700
Dry solids content (%):	100
EMICODE:	EC1 R Plus - very low emission
Grain size (D_{max}):	0.5 mm
Packaging:	20 kg bag
OPERATING CHARACTERISTICS (at +20°C - 50% R.H.)	
Layer thickness per layer:	from 5-50 mm
Recommended amount of added water:	3.6 litre/bag (18%)
Flow ability w/3.6 ltr. water (SS 923519):	155-165 mm
Flow ability w/3.6 ltr. water (EN 12706):	135-145 mm
Density (kg/m^3):	2050
pH:	approx. 12
Application temperature:	from +10° to +25°C
Pot life:	approx. 30 min.
Setting time (EN 13454-2):	NPD
Walkable after:	1-3 hours
Ready for coating/coverage after:	4 hours
FINAL PERFORMANCE	
Fire resistance (EN 13501-1):	F
Compressive strength after 1 day (EN 13892-2) (N/mm^2):	16.5
Compressive strength after 28 days (EN 13892-2) (N/mm^2):	40.5 (C40)
Flexural strength after 28 days EN 13892-2) (N/mm^2):	10.9 (F10)
Shrinkage (EN 13454-2 / EN 13872) (< 10 mm):	< 0.5 mm/m
Consistency (EN 12706):	NPD
Adhesion (UNI EN 13892-8:2004):	NPD

All our operations are carried out according to our certification in accordance with NS EN ISO 9001 and NS EN ISO 14001.

Uniplan Eco TDR

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Uniplan Eco TDR contains cement, which in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. It is recommended to wear protective gloves and goggles and to take the usual precautions when handling chemical products. In case of contact with eyes or skin wash immediately with plenty of water and consult a doctor.
For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website 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 (Gemeinschaft 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 Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

All relevant references for the product are available upon request and from www.mapei.com

4022-4-2014 (GB x N)

MAPEI®
BUILDING THE FUTURE