

Ultratop Industrial



Self-levelling industrial floor screed based on special hydraulic binders for abrasion-resistant flooring, thickness from 5 to 40 mm

CLASSIFICATION ACCORDING TO EN 13813

Smoothing layers of **Ultratop Industrial** applied according to the specifications in this Technical Data Sheet are classified as CT - C40 - F10 - A9 - A2_{fl}-s1 in compliance with EN 13813 Standards.

WHERE TO USE

Ultratop Industrial is used internally in industrial buildings, for levelling and smoothing new or existing concrete and screed substrates in thicknesses from 5 to 40 mm. **Ultratop Industrial** can be used inside warehouse industrial areas and surfaces where rubber-wheeled vehicles are in use.

Ultratop Industrial may be left as a finished floor due to its high mechanical strength and resistance to abrasion and thanks to its versatility, is suitable for numerous applications in the building sector for industrial use.

Some application examples

- New floors in workshops, factories, store rooms, plant rooms, garages and warehouses.
- Abrasion-resistant floors on concrete and screed.
- Industrial floors that must be protected with epoxy coatings and paints in chemical and food processing plants, textile mills and tanneries.

TECHNICAL CHARACTERISTICS

Ultratop Industrial is a self-levelling product in powder form available in grey, made up of special quick-drying and quick-setting binders, specially graded silica sand, synthetic resins and special additives developed in MAPEI's own R&D Laboratories.

When mixed with water, **Ultratop Industrial** becomes a self-levelling compound which is easy to apply either by hand or pump in thicknesses from 5 to 40 mm.

After setting, which takes place in only a few hours, **Ultratop Industrial** has a high level of compressive and flexural strength, bonds perfectly to the substrate and thanks to its special composition, dries quickly so that any further finishing coat may be applied after a very short time.

Ultratop Industrial is classified as CT - C40 - F10 - A9 - A2_{fl}-s1 according to EN 13813:2002 Standards. CT refers to a cementitious-based product, C40 and F10 refer to the compressive strength and flexural strength, respectively, after 28 days, A9 is the Böhme abrasion-resistance coefficient and A2_{fl}-s1 is the fire-reaction class.

Ultratop Industrial complies with the principles defined in EN 13813 "Screeds and materials for screeds – Materials for screeds – Properties and requirements", which defines the requirements applied to materials for screeds used in the construction of internal floors. Screeds and structural covering, such as those which help increase the load-bearing capacity of floors, are not included in this Standard. Resin flooring and cementitious screeds are included in this specification. They must bear the CE symbol, as illustrated in attachment ZA.3 Tables ZA1.5 and 3.3.

RECOMMENDATIONS

- Do not add more water to the mix once **Ultratop Industrial** starts to set.

- Do not add lime, cement, gypsum or other binders to the **Ultratop Industrial** mix.
- Do not use **Ultratop Industrial** on substrates which are subject to rising damp (consult the MAPEI Technical Services Department).
- Do not use **Ultratop Industrial** for floating screeds. **Ultratop Industrial** must always be fixed to a solid, compact substrate.
- Do not use **Ultratop Industrial** on wet surfaces.
- Do not use **Ultratop Industrial** on metallic surfaces.
- Do not use **Ultratop Industrial** at temperatures lower than +5°C or higher than +35°C.
- The colours of floors made using **Ultratop Industrial** are not always uniform, a typical feature of cementitious-based products. Apart from the inherent nature of this kind of product, colour variations may also be caused by the way the product is applied. Also, it must be cast continuously without long pauses, in order to guarantee perfect flatness.

APPLICATION PROCEDURE

Preparing the substrate

Substrates must be dry, solid and free of dust, loose and detached parts, paint, wax, oil, rust and all other pollutants.

Apply a compressible band around the perimeter of the rooms to be laid and around any vertical elements which pass through the floor (such as pillars and columns).

Concrete surfaces must be prepared by shot-blasting or grinding and primed with **Primer SN** and, where required, reinforced with **Mesh 320** (glass fibre mesh) followed by a full broadcast of **Quartz 1.2**.

After application, leave the **Primer SN** to dry for 12-24 hours, according to the surrounding temperature.

Before casting the **Ultratop Industrial**, remove excess quartz with a vacuum.

Cracks in the substrate must be repaired beforehand using **Eporip**.

Preparing the mix

Pour the content of a 25 kg bag of **Ultratop Industrial** into a container with 4.25-4.75 l of clean water and continue mixing with a low-speed electric mixer until a smooth, flowable, lump-free mix is formed.

Let it stand for 2-3 minutes and before applying, remix the blend for a few minutes more.

Only prepare the amount of **Ultratop Industrial** which will be applied within 15 minutes at a temperature of +23°C. The pot life of the mix varies according to the temperature and reduces as the temperature increases.

If **Ultratop Industrial** is to be applied on medium to large-sized surfaces, larger quantities may be prepared using a vertical-shaft mixer pump.

If it is mixed using mechanical means, the amount of water required is the same as when mixing by hand. Mix the product until the blend is completely homogenous before laying.

Laying the mix

Spread **Ultratop Industrial** by hand or with a pump in a single layer of 5 to 40 mm and a smoother for a natural finish.

Make sure that the material is cast in a regular, continuous flow without interruptions, to avoid defects in flatness and differences in colour. Thanks to its self-levelling properties, **Ultratop Industrial** eliminates all imperfections left by the smoother.

When applying the product, respect the expansion joints in the substrate and form distribution joints at least every 50 m². With heated floors, the bay size must be no more than 25-30 m².

Seal joints with **Mapeflex PU45** single component, quick-hardening thixotropic polyurethane sealant and adhesive with a high modulus of elasticity for sealing expansion and distribution joints. Insert **Mapefoam** closed-cell polyethylene foam cord in the joint beforehand to obtain the required depth and avoid the sealant sticking to the bottom of the joint.

Floors made using **Ultratop Industrial** must be protected and then made non-absorbent using a Mapei finishing system. Choose the most suitable finishing system according to the finish or level of wear-resistance required. Please refer to MAPEI Technical Services department for information.

Cleaning

Whilst still fresh, **Ultratop Industrial** may be cleaned from hands and tools with water.

CONSUMPTION

Ultratop Industrial used pure:
16.5-17.5 kg/m² per cm of thickness.

PACKAGING

Ultratop Industrial is available in 25 kg bags.

STORAGE

Ultratop Industrial remains stable for 12 months if stored in a cool dry place.

If stored for longer periods, the setting time of **Ultratop Industrial** may increase but without affecting its final characteristics.

The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Ultratop Industrial is irritant; contains cement that, when in contact with perspiration or other body fluids, may cause

TECHNICAL DATA (typical values)

In compliance with:

– EN 13813 : 2002, CT - C40 - F10 - A9 - A2_{II}-s1

PRODUCT IDENTITY

Consistency:	fine powder
Colour:	grey
Bulk density (kg/m ³):	1,300
Dry solids content (%):	100
EMICODE:	EC1 R - very low emission

APPLICATION DATA (at +23°C and 50% R.H.)

Mixing ratio:	approx. 17-19 parts water per 100 parts by weight of Ultratop Industrial
Thickness (mm):	from 5 to 40
Self-levelling:	yes
Density of mix (kg/m ³):	2,000 to 2,100
pH of mix:	approx. 12
Application temperature range:	from +5°C to +35°C
Pot life:	15 minutes
Setting time:	60 minutes
Set to light foot traffic:	3-4 hours

FINAL PERFORMANCES

Performance characteristic	Test method	Requirements according to EN 13813 for cementitious screeds	Performance of product		
Compressive strength:	EN 13892-2	5 < N/mm ² < 80 (28 days)		+23°C	
			24 h	≥ 20	
			72 h	≥ 25	
			7 d	≥ 30	
			28 d	≥ 40	
Flexural strength:	EN 13892-2	1 < N/mm ² < 50 (28 days)		+23°C	
			24 h	≥ 5	
			72 h	≥ 7	
			7 d	≥ 9	
			28 d	≥ 11	
Adhesion to concrete:	EN 13892-8	> 1.5 N/mm ²		+23°C	
			24 h	2.5 (substrate failure)	
			28 d	2.5 (substrate failure)	
Abrasion resistance Taber abrasion test (H22 disk - 500 g - 200 rpm):	ASTM D4060			+5°C	+23°C
			7 d	1.7	0.7
			28 d	1	0.6
Abrasion resistance Böhme abrasion test:	EN 13892-3	1,5 < cm ³ /50 cm ² < 22		+23°C	
			28 d		9
Reaction to fire:	EN 13501-1	Value declared by manufacturer	A2 _{II} -s1		

an irritating alkaline reaction. Use protective gloves and goggles.
For further and complete information about the safe use of our product please refer to our latest version of the Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

N.B.

Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have no control over the circumstances in which our product is used. It is therefore important that the end users satisfy themselves that the product and conditions are suitable for the envisaged application.

No warranty can be given or responsibility accepted other than, that the product supplied by us will meet our written specification.

End users should ensure that our latest

product data and safety information sheets have been consulted prior to use.

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



Mapei UK Ltd. Steelpark Road, Halesowen, West Midlands B628HD

EN 13813 CT- C40 - F10 - A9 - A2_{fl}-s1
Cementitious screed material for internal use

Reaction to fire:	A2 _{fl} -s1	Abrasion:	A9
Release of corrosive substances:	CT	Sound insulation:	NPD
Water vapour permeability:	NPD	Sound absorption:	NPD
Compressive strength:	C40	Thermal resistance:	NPD
Flexural strength:	F10	Chemical resistance:	NPD