



# MAPEQUICK-FLOOR<sup>®</sup>

## MULTIFUNCTIONAL COHESION ENHANCING, WATER RETAINING, SET ACCELERATING ADMIXTURE FOR INDUSTRIAL CONCRETE FLOORS

### DESCRIPTION

MAPEQUICK-FLOOR is a multifunctional cohesion enhancing, water retaining, set accelerating liquid admixture for use in combination with normal superplasticizers, specifically formulated for industrial concrete floors.

### WHERE TO USE

MAPEQUICK-FLOOR drastically shortens initial/final setting times. This property allows slabs to be finished and wear-resistant treatments to be applied the same day the concrete is poured, significantly reducing waiting time between placing and finishing.

With MAPEQUICK-FLOOR, crews are spared working through the night on finishing operations due to the lengthy setting time of concrete mixed with normal superplasticizers, with subsequent delays for time off in the morning. As a result, MAPEQUICK-FLOOR maximizes weekly construction scheduling.

MAPEQUICK-FLOOR is manufactured from special raw materials that limit bleeding. MAPEQUICK-FLOOR eliminates the buckling that occurs in concrete mixed with superplasticizers alone because it makes the cement hydrate more homogeneously throughout the thickness of the slab.

Because it reduces bleeding, MAPEQUICK-FLOOR facilitates the subsequent incorporation of wear-resistant dry shake quartz and cement finishes so that they bond monolithically to the slab.

MAPEQUICK-FLOOR consists of high molecular weight polymers that produce cohesive concrete without bleeding and without having resort to high dosages of cement, even when using sand lacking in fine aggregate.

MAPEQUICK-FLOOR makes the cement mix highly cohesive, thus preventing dangerous buckling of the concrete slab, provided that the expansion joints are placed at the proper distances.

MAPEQUICK-FLOOR is especially recommended for:

- industrial concrete floors with wear-resistant quartz and cement dry shake surface finishes, especially during cold weather (October-March).

MAPEQUICK-FLOOR can alternately be used to mix concrete with sufficient compressive strength that it can be released from forms in the absence of external loads only a few hours after placing (6-10 hours).

### Typical applications

MAPEQUICK-FLOOR catalyzes the hydration of the aluminate phases of cement and makes it more homogeneous

in the mix because of its high water retaining action. As a result, concrete mixed with MAPEQUICK-FLOOR is cohesive, without segregation or bleeding, with a high degree of water retention and, most importantly, shorter initial/final setting times even in cold weather.

MAPEQUICK-FLOOR is especially recommended for:

- industrial concrete floors treated with dry shake or other quartz and cement wear-resistant finishes.

### TECHNICAL CHARACTERISTICS

MAPEQUICK-FLOOR is a mixture of high



molecular weight polymers with high cohesive action and water retention combined with special additives that catalyze the hydration reaction of the aluminate phase of cement. MAPEQUICK-FLOOR was developed by Mapei to be used in the preparation of cohesive concrete without bleeding or segregation, with reduced setting times even in very cold weather.

MAPEQUICK-FLOOR is a liquid admixture that is especially effective for mixing concrete for industrial floors. Because it increases the cohesiveness of concrete, MAPEQUICK-FLOOR admixture produces concrete mixes that are easy to place and can be quickly compacted.

MAPEQUICK-FLOOR:

- drastically shortens finishing times (Fig. 1) for industrial floors and allows wear-resistant surface finishes to be applied the same day the concrete is poured;
- produces super-fluid, easy to place concrete with a slump value of 24 cm;
- reduces evaporation of water from the surface of fresh concrete, eliminating the buckling typical of concrete mixed with normal superplasticizers;
- reduces bleeding (Fig. 2), facilitating the application of anti-abrasion finishes;
- prevents segregation, greatly reducing buckling in concrete slabs.

#### COMPATIBILITY WITH OTHER MAPEI PRODUCTS

MAPEQUICK-FLOOR is compatible with Mapei plasticizers and superplasticizers that are normally used for high quality, durable concrete. MAPEQUICK-FLOOR is also compatible with:

- MAPEPLAST PT1 air-entraining admixture for concrete resistant to freeze/thaw cycles;
- MAPEFLUID PZ500 powdered additive containing microsilica and superplasticizers for floors that are durable even in the presence of NaCl and CaCl<sub>2</sub> deicing salts;
- EXPANCRETE, the Mapei expanding agent for shrinkage-compensated floors without contraction joints;
- Fly ash for concrete with artificial pozzolan;
- Mapei's DMA 1000 and DMA 2000 form-release compounds;
- MAPECURE E, the Mapei curing compound for preventing the rapid evaporation of water in concrete flatwork (for floors without wear-resistant finishes).

#### CONSUMPTION

##### Dosage by weight

2.7 to 3.4 kg per 100 kg of cement.

##### Dosage by volume

2.0 to 2.5 litres per 100 kg of cement.

#### TECHNICAL DATA

##### PRODUCT IDENTIFICATION:

Appearance:	liquid
Colour:	colourless, with blue flecks
Mass:	1.35 ± 0.02 kg/l at +20°C
Solids content:	50%
Principal action:	shortened early and final setting times
Collateral action:	increased cohesion and water retention
Chlorides:	absent
Shelf life:	12 months in original sealed containers. Protect from frost
Health hazard EEC 88/379:	no
Inflammable:	no
Customs class:	3824 40 00

#### PERFORMANCE DATA OF MAPEQUICK-FLOOR IN CONCRETE

##### DOSAGE OF MAPEFLUID N100 ADMIXTURE

% BY VOLUME OF CEMENT:	0.0	1.0	1.0	1.0
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W/C ratio:	0.77	0.64	0.64	0.64
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##### Dosage of MAPEQUICK-FLOOR ADMIXTURE

% BY VOLUME OF CEMENT:	0.0	0.0	2.3	2.5
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Workability: initial slump in cm:	24	24	25	25
slump at 30 min in cm:	20	21	22	22

Bleeding:	100	40	35	30
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##### Setting time at +15°C

initial:	5h15'	7h30'	5h15'	4h45'
final:	8h30'	10h45'	8h45'	8h00'

##### Average compressive strength (MPa)

after 1 day:	4	9	9	10
after 7 days:	16	25	25	25
after 28 days:	22	34	34	34

##### Strength class (MPa)

according to (UNI 9858 and ENV 206):

R <sub>ck</sub> (Type A control)	15	30	30	30
R <sub>ck</sub> (Type B control, δ = 5 MPa)	15	25	25	25

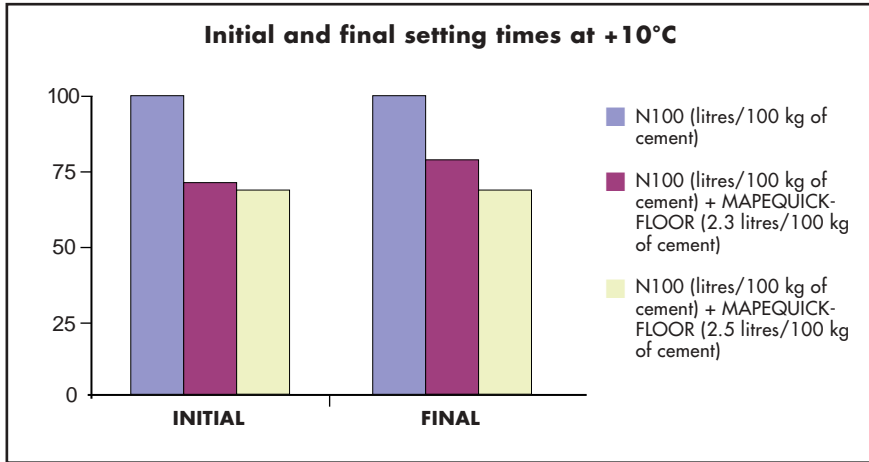


Fig. 1 - Reduction of initial and final setting times at +10°C with MAPEQUICK-FLOOR admixture

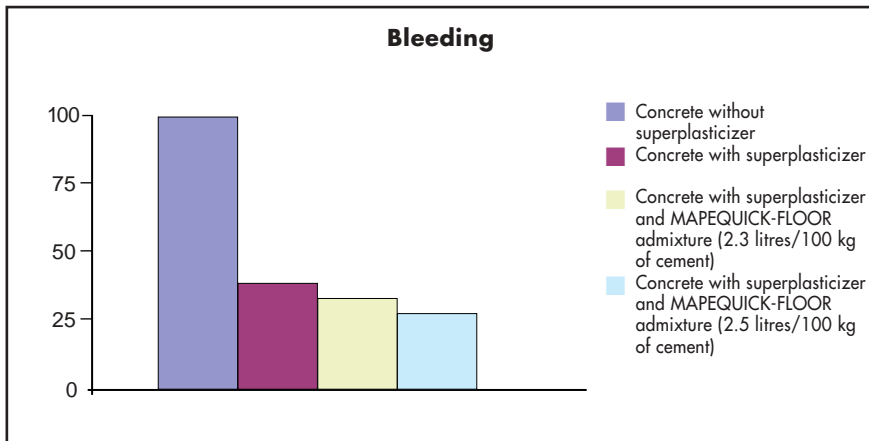


Fig. 2 – Reduction in bleeding with MAPEQUICK-FLOOR admixture

## PACKAGING

200 litre steel drums and 1000 l tanks.

The product is also available in bulk on request.

## STORAGE

Store in closed containers away from direct sunlight. Protect from frost.

## WARNING

*N.B. Although the technical details and recommendations contained in this report 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 applications; 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.*

**N.B. FOR PROFESSIONALS**

