

# PRODUCT CATALOGUE CONCRETE ADDITIVES

VALID FROM JANUARY 2021





**EVERY DAY, OUR CUSTOMERS RELY ON  
MAPEI AT CONSTRUCTION SITES ALL  
OVER THE WORLD.**

**MAPEI. BUILDING EXPERTISE.**

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## ORDERING SERVICE

**Telephone orders:** +43-2783-8891-422

**Orders by mail:** bestellungen.la@mapei.at

Our order offices are staffed for you:

Monday to Thursday from 7.00 – 16.00

Friday from 7.00 – 11.30

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## DELIVERY SERVICE & CONDITIONS

In most cases, the concrete additives are pumped directly into the tank systems of the mixing plants. This saves packaging and time. Customer orders are grouped into regional rounds and specially equipped trucks supply and transfer the products. The delivery intervals are adjusted to demand in order to provide sufficient concrete additives for ongoing concrete production.

Please refer to our General Terms and Conditions on the last pages for **delivery conditions**.

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## STORAGE CONDITIONS

Protect the products against direct sunlight and frost. Details per product (e.g.: fibres, Mapecolor Pigment, etc.) can be found in the product data sheet.

### Imprint

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Our customers also benefit from the global cooperation among all MAPEI plants. Hardly any other company in the industry can draw on such extensive and worldwide know-how in the development of new products and individual problem solutions.

Our modern training centre offers our customers and partners the opportunity to attend product-specific seminars and to immediately perfect the newly acquired knowledge in the adjoining practice room.

More information at [www.mapei.at](http://www.mapei.at)



# BEI UNS STIMMT DIE [BAU]CHEMIE!



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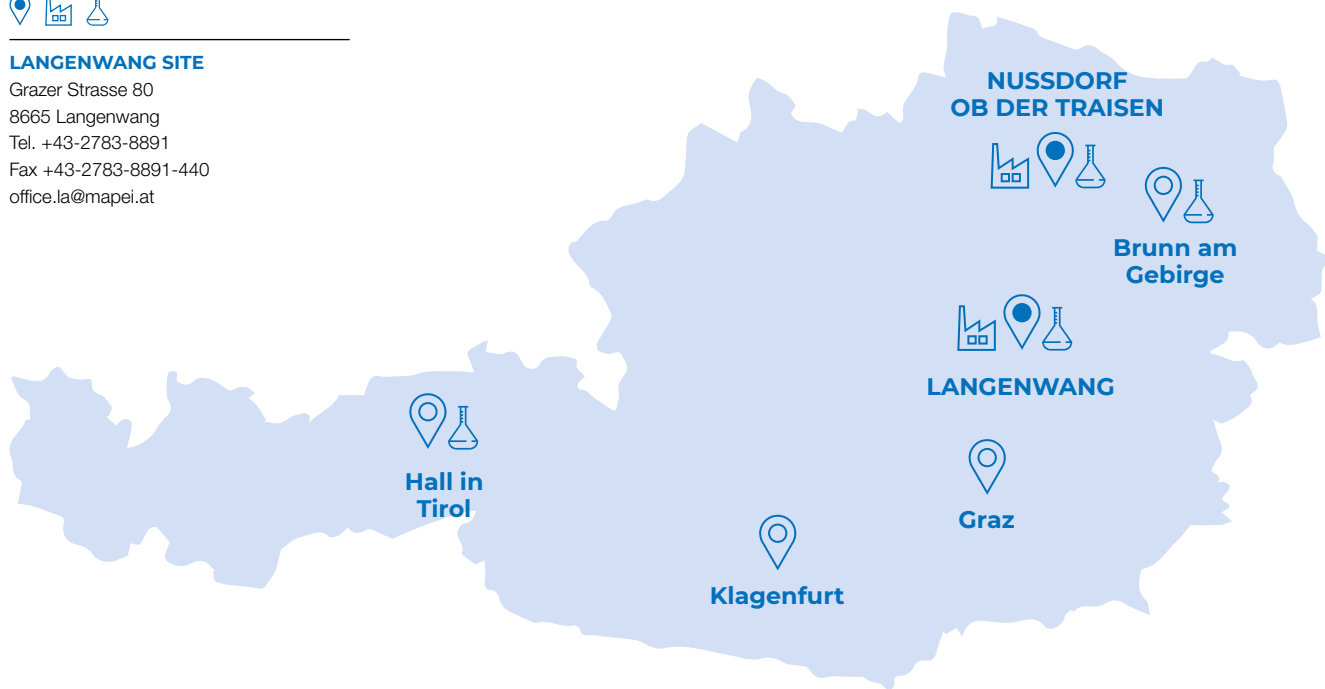
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## NOT AN ADVERTISING SLOGAN, BUT A COMMITMENT TO THE COMPANY PHILOSOPHY!

With its production sites in Nussdorf, Traisen and Langenwang, as well as numerous external warehouses throughout Austria, MAPEI Austria GmbH ensures a comprehensive supply of quality-tested building materials and chemical products for construction. The product characteristics of the wide range of over 5,000 products are constantly being developed and adapted to the requirements of the construction industry.

State-of-the-art test laboratories as well as mobile laboratory buses guarantee flexible and tailor-made project support as well as the most advanced know-how directly at your construction site! The laboratory locations in Langenwang (Steiermark), Nussdorf ob der Traisen (Lower Austria), Brunn am Gebirge (Lower Austria) and Hall in Tirol (Tyrol) are supplemented with mobile laboratories. With more than 10,500 employees worldwide, 83 production sites in 36 countries and 31 research centres, MAPEI is one of the top market leaders in the field of construction chemistry. This makes MAPEI a reliable partner for the future.



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FRI: 6.30–12.00



## GRAZ WAREHOUSE – EfR partner warehouse

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FRI: 7.15–13.00

- Locations
- Warehouse
- Production
- Laboratory
- ATM





# CERTIFICATES AND LABELS

## MAPEI PRODUCTS AND SYSTEMS MEET THE REQUIREMENTS OF THE EUROPEAN CONSTRUCTION PRODUCTS REGULATION (CPR 305/2011)

All construction products covered by a specific harmonized technical specification comply with the European Construction Products Regulation (CPR 305/2011/EU) and bear the CE mark on their packaging.

For these products, you can download the corresponding Declaration of Performance (DoP) on our website [www.mapei.at](http://www.mapei.at).

In order to simplify the labelling of products with CE marks and the associated reference standards, we have added the following logos to the product and price catalogue:



### READY-TO-USE MORTAR FOR SCREEDS AND FILLERS

MAPEI mortars for screeds and fillers comply with the standard EN 13813 and bear the CE marking according to EN 13813, Annex ZA.



### PRODUCTS AND SYSTEMS FOR BUILDING PROTECTION AND CONCRETE REPAIR

The MAPEI products for concrete repair and construction protection carry the CE marking according to EN 1504 (parts 2, 3, 4, 5, 6 and 7).



### PLASTER MORTAR

The MAPEI plastering mortars carry the CE marking according to EN 998-1, as well as EN 998-2.



### CONCRETE ADDITIVES

The MAPEI liquefiers and super-liquefiers for mortar and concrete carry the CE marking according to EN 934-2, EN 934-4 and EN 934-5.

## OUR PARTNERSHIPS

### AUSTRIAN SOCIETY FOR CONSTRUCTION TECHNOLOGY



In addition to CE certification according to EN 1504, additional parameters for concrete repair products must be checked in Austria and subjected to external monitoring. These products bear the "Repair Product" quality mark according to the ÖBV.

### CONCRETE MARKETING AUSTRIA



Merger of associations of manufacturers of cement, ready-to-use concrete, ready-mix concrete and additives in Austria. All associations have a common goal: To increase the image and market value of concrete in terms of sales. The target groups are end customers, architects, planners and contracting authorities.

### TECHNICAL ASSOCIATION OF ENGINEERING OFFICES



Engineering firms are highly qualified specialists in their respective fields of activity, because the certificate of competence that the owner of an engineering firm has to provide is the strictest known by the Austrian trade code. Engineering firms are not manufacturers and do not take part in the execution of the construction itself.

## OUR COMMITMENT TO THE ENVIRONMENT – MORE THAN JUST SUSTAINABILITY

MAPEI is the ideal partner for your construction project, because our advanced products and technologies meet the strictest European and international standards.

Adhesives and grouts for ceramic tiles and natural stone, ready-to-use mortar for screeds and concrete repair work, eco-adhesives and eco-concrete additives, all carry the CE marking and are certified according to internationally recognized standards (LEED, etc.).





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# CONCRETE PLASTICIZER

**CONCRETE PLASTICIZERS (CP)** must meet the requirements of EN 934-2, Table 2. A concrete plasticizer is defined as follows: "Additive that allows a reduction of the water content of a given concrete mixture without affecting the consistency, or increases the setting/spreading dimension without changing the water balance, or which simultaneously produces both effects."

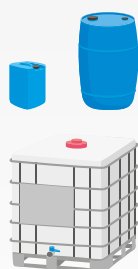
## Our concrete plasticizers...

- are universally applicable
- are used on the basis of lignosulphonate to save water and to improve workability
- can be used in all areas of the ready-mixed concrete industry
- result in the concrete having better workability and a lower water consumption
- reduce the surface tension of the water, so cement, additives and fine grains are better wetted
- effect that the cement laitance is opened up better and the fluidity is considerably increased





# 1. CONCRETE PLASTICIZER



## Mapeplast BV 34

Concrete plasticizer based on lignosulphonate.

**MAPEPLAST BV 34** improves workability, reduces water demand and reduces the fresh concrete's viscosity. Universally applicable in the transport industry as well as with concrete goods.

- **Base:** lignosulphonate
- **Density:** 1.14–1.20 g/cm<sup>3</sup>
- **Colour:** dark brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

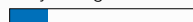
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



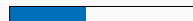
## Mapeplast BV 44

Concentrated concrete plasticizer based on lignosulphonate.

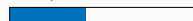
**MAPEPLAST BV 44** improves workability, reduces water demand and reduces the fresh concrete's viscosity. Universally applicable in the transport industry as well as with concrete goods.

- **Base:** lignosulphonate
- **Density:** 1.18–1.24 g/cm<sup>3</sup>
- **Colour:** dark brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

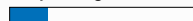
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



## Mapeplast N10

Concentrated concrete plasticizer based on lignosulphonate.

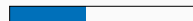
**MAPEPLAST N10** is a non-defoamed concrete plasticizer that improves workability, reduces water demand, and reduces the fresh concrete's viscosity.

- **Base:** lignosulphonate
- **Density:** 1.17–1.23 g/cm<sup>3</sup>
- **Colour:** dark brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength





# SUPER- PLASTICIZERS

**SUPERPLASTICIZERS (SP)** must meet the requirements of EN 934-2, Table 3.1/3.2. A superplasticizer is defined as follows: "Additive that allows a reduction of the water content of a given concrete mixture without affecting the consistency, or increases the setting/spreading dimension without changing the water balance, or which simultaneously produces both effects."



### SUPERPLASTICIZERS ARE THE MOST IMPORTANT GROUP OF ACTIVE INGREDIENTS IN CONCRETE ADDITIVES

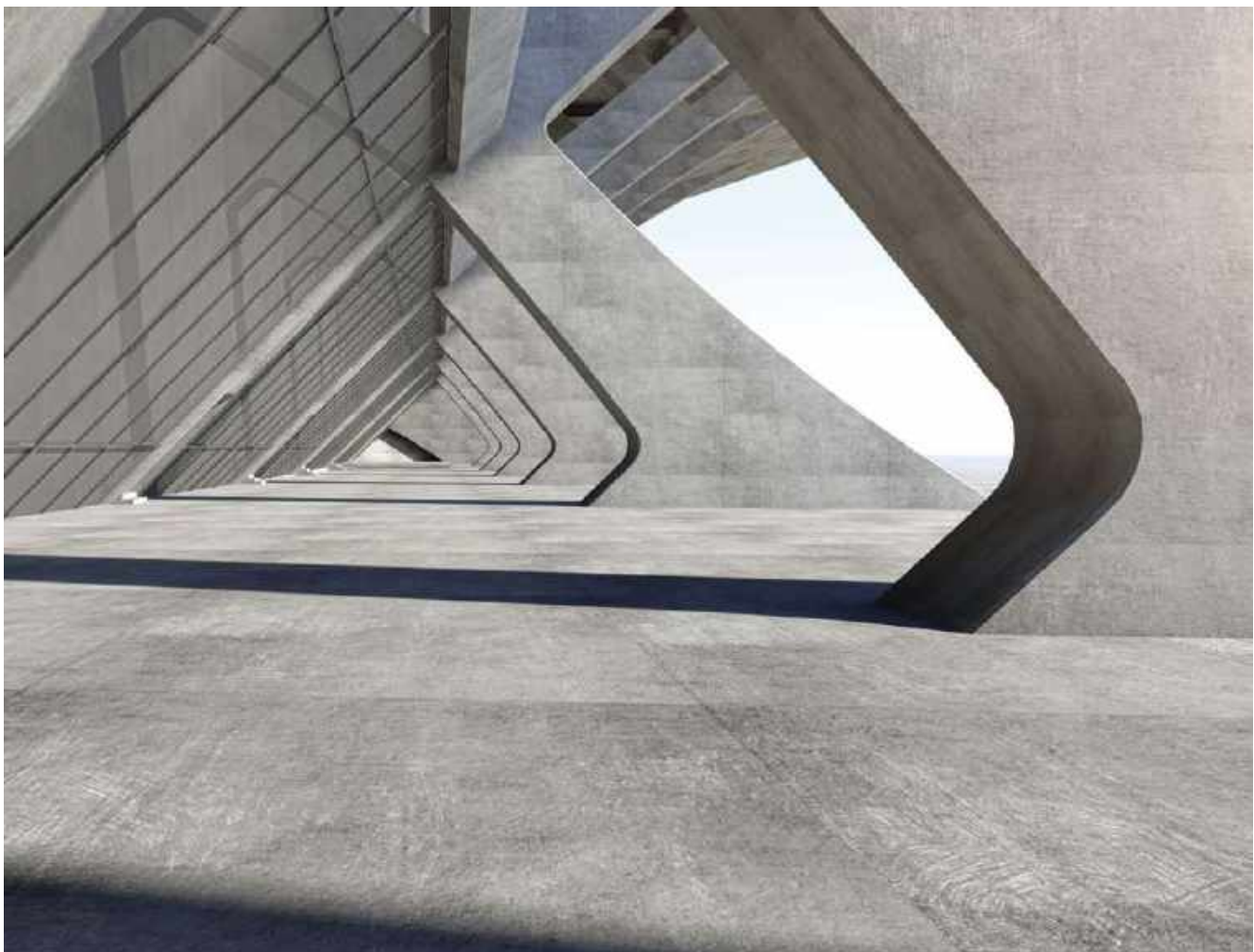
- superplasticizers can alter the properties of concrete in a variety of ways
- the liquefaction of the concrete makes it possible to achieve workable concrete consistencies
- by reducing the water content and thus the water/cement ratio, the strength, quality and durability of the concrete is increased
- superplasticizers can prolong the processability of concrete
- the air content, the early strength and the fresh concrete viscosity of the concrete can be controlled
- this versatility allows the properties of concrete to be optimized specifically for individual concrete applications (precast concrete, ready-mixed concrete, sprayed concrete, industrial floors, lightweight concrete, etc.)

### DYNAMON SERIES

The variety of products from the **DYNAMON** product range can be specifically adapted to concrete constituents or can help solve problems such as slump retention, use of residual water, microstructure stability or pumping problems.



Even in the case of challenges such as the use of difficult sand, recycled stone grains or clinker substitutes in cement, the right superplasticizer technology is crucial for the quality of the concrete.



# SUPERPLASTI- CIZERS READY-MIXED CONCRETE





### DYNAMON RC

One of the biggest challenges in the ready-mixed concrete sector is slump retention – especially during the summer months. The polymer selection of the **RC LINE** extends the processability of concrete without significantly slowing down the hardening of the cement. The individual superplasticizers have different levels of water reduction capacity or also offer additional benefits such as increased microstructure stability.

### DYNAMON SF

The **DYNAMON SF** line was developed in order to further improve the appearance of concrete and the surface treatment of high quality fresh concrete.

Not only the consistency, but also the viscosity of the concrete is evaluated. This **improvement in the properties of fresh concrete** is achieved by the composition of the polymers – without air intake, so that no compromises in strength or slump retention need to be accepted.

With **DYNAMON SF**, concrete with low water/cement value can be produced with good workability.



## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### DYNAMON PCT

The combination of polycarboxylate ether and lignosulphonate combines the advantages of two additive constituents. The slow adjustment of the superplasticizer makes it **robust in case of temperature changes and fluctuations in the water content.**

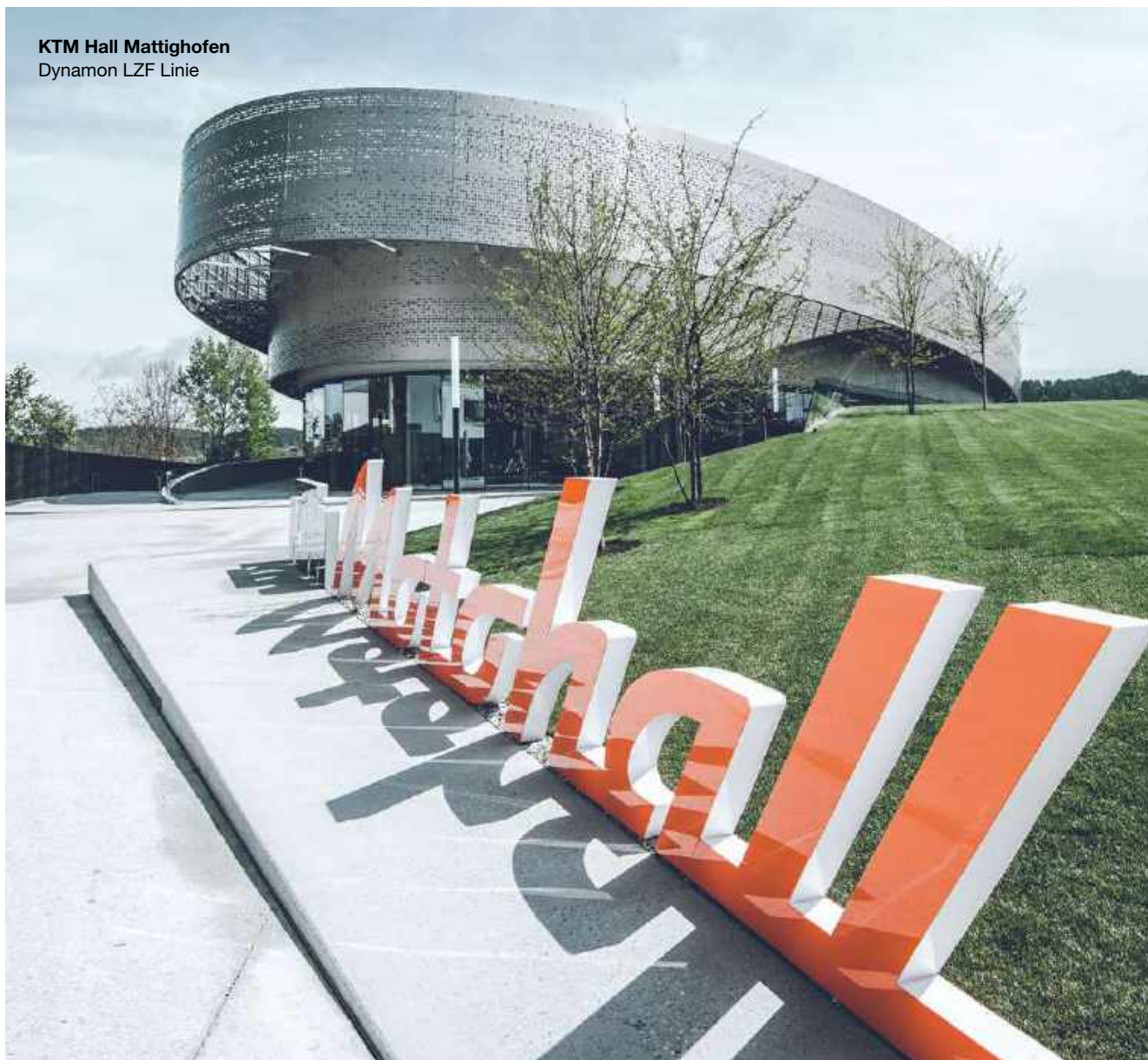
**DYNAMON PCT** offers a favourable appearance of concrete. Due to the high degree of adjustment made possible by the polycarboxylate ether, the water reduction capacity, the slump retention, the application of the fresh concrete and the curing speed can be adjusted for individual superplasticizers.

### DYNAMON LZF & ALL-ROUNDER

The **DYNAMON LZF** product line is characterized by its proven and robust application of superplasticizers in the ready-mixed concrete industry:

- the strong application characteristics **cushion the impact of fluctuations in the raw materials**
- influences due to **the temperature changes** between winter and **summer months are minimized**
- depending on the dosage, various properties such as low adhesive strength, short mixing time and water saving or slump retention can be influenced

**KTM Hall Mattighofen**  
Dynamon LZF Linie





### SLUMP RETENTION ADMIXTURES

If, after transport and installation, the processability of the fresh concrete with the normal superplasticizer is not sufficient, the slump retention can be extended with special polymers. This is necessary in case of very **long transport distances, high outside temperatures or a long discharge process.**

The slump retention admixture is dosed in combination with the existing superplasticizer. The hardening of the concrete is not significantly slowed down.

### SUPERPLASTICIZERS FOR INDUSTRIAL FLOORS

Concrete for the production of monolithic concrete slabs presents the superplasticizer with challenges in terms of **sufficient processability of concrete, pumpability, rapid solidification of concrete and its rapid hardening.**

Skin formation must be avoided so that the further processing of the surface can be done quickly and without errors. The quickly adjustable superplasticizers allow for variations in the processability of concrete.

Also note the other **MAPEI** products up to the compensated shrinkage **MAPECRETE system.**



Tullnerfeld TF7, Schüring  
Dynamon LZ 553

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.1 Dynamon RC Line



#### Dynamon RC 220

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- very long workability
- low adhesive strength of the fresh concrete
- very economical

• **Base:** polycarboxylate ether

• **Density:** 1.04–1.08 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon RC 420

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- long workability
- low adhesive strength of the fresh concrete
- very economical

• **Base:** polycarboxylate ether

• **Density:** 1.03–1.07 g/cm<sup>3</sup>

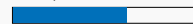
• **Color:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

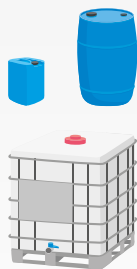
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon RC 505

Superplasticizer with very long workability for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- very long workability, also with difficult raw materials

• **Base:** polycarboxylate ether

• **Density:** 1.08–1.12 g/cm<sup>3</sup>

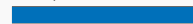
• **Colour:** milky white-yellow

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



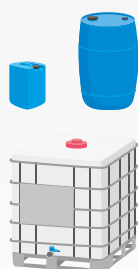
Early strength





## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.1 Dynamon RC Line



#### Dynamon RC 520

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- long workability
- low adhesive strength of the fresh concrete
- very economical

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04 – 1.08 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon RC 610

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- very long workability
- robust application
- good early strength

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.06 – 1.10 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon RC 650

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- very long workability
- low dosage
- very economical

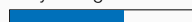
Liquefaction / Water reduction



Slump retention / Processability of concrete



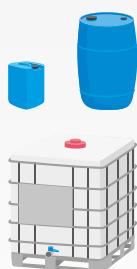
Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.05 – 1.09 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.1 Dynamon RC Line



#### Dynamon RC 730

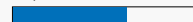
Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- very long workability
- low dosage
- very economical

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.05–1.09 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon RC 770

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- very long workability
- good early strength
- year-round superplasticizer

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.03–1.07 g/cm<sup>3</sup>
- **Colour:** milky white-yellow
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon RC 775

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- very long workability
- low dosage

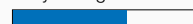
Liquefaction / Water reduction



Slump retention / Processability of concrete



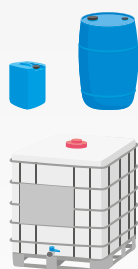
Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.05–1.09 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.1 Dynamon RC Line



#### Dynamon RC 910

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- very high water reduction
- very long workability
- low adhesive strength of the fresh concrete
- low dosage
- year-round superplasticizer

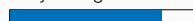
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.06 – 1.10 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon RC 930

Superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- very high water reduction
- very long workability
- extremely robust
- high microstructure stability of the fresh concrete

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.06 – 1.10 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.2 Dynamon SF Line



#### Dynamon SF Advanced



Universal superplasticizer for ready-mixed concrete.

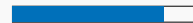
The concrete can be easily applied and further processed.

The superplasticizer can be easily mixed in – even with earth-moist consistencies.

• **Performance characteristics:**

- high water reduction
- sufficient workability
- robust application
- optimal for C<sub>3</sub>A-free cement
- low adhesive strength of the fresh concrete

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.02–1.06 g/cm<sup>3</sup>

• **Colour:** light brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon SF Advanced High



Universal superplasticizer for ready-mixed concrete.

The concrete can be easily applied and further processed.

The superplasticizer can be easily mixed in – even with earth-moist consistencies.

• **Performance characteristics:**

- very high water reduction
- sufficient workability
- low dosage
- optimal for C<sub>3</sub>A-free cement
- low adhesive strength of the fresh concrete

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.04–1.08 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon SF Advanced 36



Universal superplasticizer for ready-mixed concrete.

The concrete can be easily applied and further processed.

The superplasticizer can be easily mixed in – even with earth-moist consistencies.

• **Performance characteristics:**

- extremely high water reduction
- sufficient workability
- low dosage
- optimal for C<sub>3</sub>A-free cement
- low adhesive strength of the fresh concrete

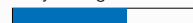
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.06–1.10 g/cm<sup>3</sup>

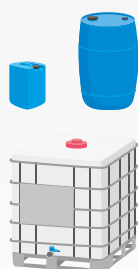
• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.2 Dynamon SF Line



#### Dynamon SF 14

Superplasticizer with low adhesive strength of the fresh concrete.



• **Performance characteristics:**

- high water reduction
- long workability
- sufficient slump retention
- good early strength

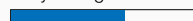
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04 – 1.08 g/cm<sup>3</sup>
- **Colour:** milky white-yellow
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

**NEW**



#### Dynamon SF 14S

Superplasticizer with economical dosage and long slump retention.



• **Performance characteristics:**

- high water reduction
- long workability
- slump retention up to 90 minutes
- low adhesion
- good workability of fresh concrete
- easy to mix

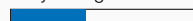
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.05 – 1.09 g/cm<sup>3</sup>
- **Colour:** milky white
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon SF 16

Superplasticizer with low adhesive strength of the fresh concrete.



• **Performance characteristics:**

- very high water reduction
- long workability
- good slump retention
- good early strength

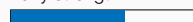
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.05 – 1.09 g/cm<sup>3</sup>
- **Colour:** milky white-yellow
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.2 Dynamon SF Line

**NEW**



#### Dynamon SF 16S

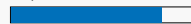
Superplasticizer with low dosage, good application and long slump retention.



• **Performance characteristics:**

- low dosage
- high water reduction
- long workability
- slump retention up to 90 minutes
- low adhesion
- good workability of fresh concrete
- easy to mix

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.06–1.10 g/cm<sup>3</sup>
- **Colour:** milky-yellowish
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon SF 18

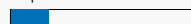
Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- sufficient workability
- low adhesive strength of the fresh concrete
- very economical

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.02–1.06 g/cm<sup>3</sup>
- **Colour:** light brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon SF 40

Superplasticizer with long workability and low adhesive strength of the fresh concrete.



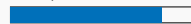
• **Performance characteristics:**

- very high water reduction
- very long workability
- very long slump retention
- good early strength

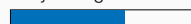
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.05–1.09 g/cm<sup>3</sup>
- **Colour:** milky white-yellow
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.3 Dynamon PCT Line



#### Dynamon PCT 210

Superplasticizer based on PCE-lignin.



• **Performance characteristics:**

- moderate water reduction
- pleasant workability
- favourable superplasticizer

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** PCE lignin

• **Density:** 1.08 – 1.14 g/cm<sup>3</sup>

• **Colour:** dark brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon PCT 629

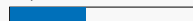
Superplasticizer with low adhesive strength of the fresh concrete.



• **Performance characteristics:**

- moderate water reduction
- long workability
- sufficient slump retention

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.05 – 1.09 g/cm<sup>3</sup>

• **Colour:** dark brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.3 Dynamon PCT Line



#### Dynamon PCT 630

Superplasticizer with low adhesive strength of the fresh concrete and long workability.



• **Performance characteristics:**

- moderate water reduction
- very long workability
- very long slump retention
- all-rounder for ready-mix concrete

Liquefaction / Water reduction



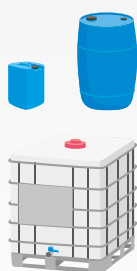
Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.07–1.11 g/cm<sup>3</sup>
- **Colour:** dark brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon PCT 631

Superplasticizer with low adhesive strength of the fresh concrete.



• **Performance characteristics:**

- good water reduction
- long workability
- long slump retention
- all-rounder for ready-mix concrete

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength

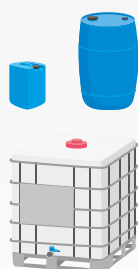


- **Base:** polycarboxylate ether
- **Density:** 1.08–1.14 g/cm<sup>3</sup>
- **Colour:** dark brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.4 Dynamon LZF Line



#### Dynamon LZF

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- long workability
- low adhesive strength of the fresh concrete
- low dosage
- year-round superplasticizer

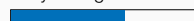
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength

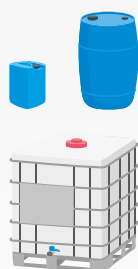


• **Base:** polycarboxylate ether

• **Density:** 1.04 – 1.08 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZF T

Superplasticizer with long workability.



• **Performance characteristics:**

- high water reduction
- very long workability
- extremely robust
- high microstructure stability of the fresh concrete

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.05 – 1.09 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZF DE

Universal robust superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- long workability
- low adhesive strength of the fresh concrete
- low dosage
- year-round superplasticizer
- high defoaming ratio for stable air content of the fresh concrete

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.04 – 1.08 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.4 Dynamon LZF Line



#### Dynamon LZF 22

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- moderate water reduction
- long workability
- low adhesive strength of the fresh concrete
- very economical

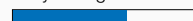
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04–1.08 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZF 35

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- very high water reduction
- very long workability
- low adhesive strength of the fresh concrete
- low dosage

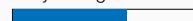
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.06–1.10 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZF ECO 2

Universal superplasticizer with long workability for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- very long workability
- extremely robust
- high microstructure stability of the fresh concrete

Liquefaction / Water reduction



Slump retention / Processability of concrete



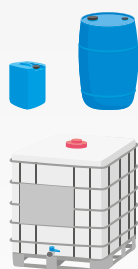
Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.06–1.10 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.5 All-Rounders



#### Dynamon LZ 40

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- sufficient workability
- robust application
- optimal for C<sub>3</sub>A-free cement
- low adhesive strength of the fresh concrete

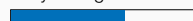
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength

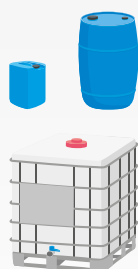


• **Base:** polycarboxylate ether

• **Density:** 1.04 – 1.08 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZ 52

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- sufficient workability
- robust application

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.05 – 1.09 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZ 76

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- long workability
- good early strength

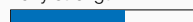
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



• **Base:** polycarboxylate ether

• **Density:** 1.04 – 1.08 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.5 All-Rounders



#### Dynamon LZ 77

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- high water reduction
- sufficient workability
- robust application
- low adhesive strength of the fresh concrete

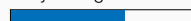
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04–1.08 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZ 87

Superplasticizer with long workability.



• **Performance characteristics:**

- very high water reduction
- very long workability
- good early strength
- high microstructure stability of the fresh concrete

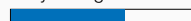
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04–1.08 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZ 87 G

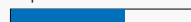
Superplasticizer with long workability.



• **Performance characteristics:**

- moderate water reduction
- very long workability
- good early strength
- year-round superplasticizer

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength

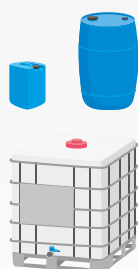


- **Base:** polycarboxylate ether
- **Density:** 1.03–1.07 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.5 All-Rounders



#### Dynamon SR 1 AT

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- very high water reduction
- very long workability
- low adhesive strength of the fresh concrete
- low dosage

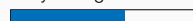
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04 – 1.08 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon SX 14 AT

High-performance superplasticizer with integrated pumping aid admixture for concrete with long workability, greatly reduces water demand.



• **Performance characteristics:**

- moderate water reduction
- long workability
- high microstructure stability of the fresh concrete

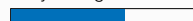
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04 – 1.08 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon SX DE

Universal superplasticizer for ready-mixed concrete.



• **Performance characteristics:**

- very high water reduction
- sufficient workability
- high microstructure stability of the fresh concrete
- low dosage

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.05 – 1.09 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.6 Slump Retention Admixtures



#### Dynamon LZ 552

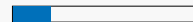
Slump retention admixture in combination with a superplasticizer with long workability.



• **Performance characteristics:**

- moderate water reduction
- extremely good workability
- slump retention up to 150 minutes
- good early strength

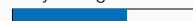
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.02–1.06 g/cm<sup>3</sup>
- **Colour:** milky white-yellow
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon LZ 553

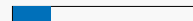
Slump retention admixture in combination with a superplasticizer with long workability.



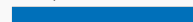
• **Performance characteristics:**

- moderate water reduction
- extremely good workability
- slump retention up to 180 minutes

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.08–1.12 g/cm<sup>3</sup>
- **Colour:** milky white-yellow
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

**NEW**



#### Re-Con AGG 100 DE

Slump retention superplasticizer based on polycarboxylate ether for concrete with difficult raw materials.



• **Performance characteristics:**

- to maintain the consistency of fresh concrete in the case of adsorbing sand or recycled aggregate
- for use in combination with a superplasticizer

Liquefaction / Water reduction



Slump retention / Processability of concrete



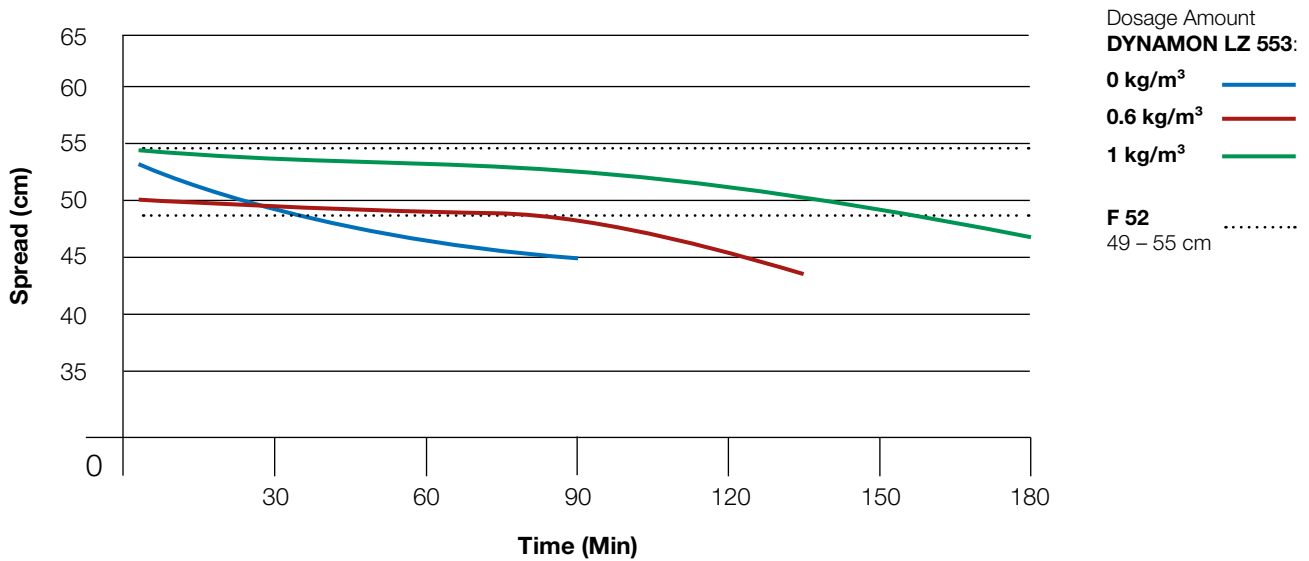
Early strength



- **Base:** modified polycarboxylate ether
- **Density:** 1.05–1.09 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

## DOSAGE TABLE – DYNAMON LZ 553

Principal action of polymers at different doses of **DYNAMON LZ 553** – to prolong the workability



### DOSING EXAMPLE

Instead of 3 kg/m<sup>3</sup>  
Dynamon LZ F use  
2,5 kg/m<sup>3</sup> Dynamon LZ F +  
1 kg/m<sup>3</sup> Dynamon LZ 553

#### Cable Car Station Ziller Valley

Slump retention admixture + superplasticizer,  
due to long routes the mountains



## 2.1 SUPERPLASTICIZERS READY-MIXED CONCRETE

### 2.1.7 Superplasticizers Industrial Floors



#### Mapefluid FM NA

Superplasticizer with high early strength for industrial floors.



• **Performance characteristics:**

- very rapid grinding possible
- fast hardening of the concrete

• **Base:** naphthalene sulphonate

• **Density:** 1.11–1.17 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Mapefluid FM NA 40

Superplasticizer with high early strength for industrial floors.



• **Performance characteristics:**

- very rapid grinding possible
- fast hardening of the concrete
- low dosage

• **Base:** naphthalene sulphonate

• **Density:** 1.17–1.23 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon Floor 10

Superplasticizer with high early strength for industrial floors.



• **Performance characteristics:**

- very rapid grinding possible
- fast hardening of the concrete
- low dosage

• **Base:** polycarboxylate ether

• **Density:** 1.23–1.29 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 256 kg barrels, 1280 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength





**Großpetersdorf Roundabout**  
Dynamon RC 775, Mapeair LP 200





# SUPER- PLASTICIZER PRECAST CONCRETE

The effect of the superplasticizer can also contribute to the stabilization of the concrete structure. This is important for SCC concrete (self-compacting).

## **DYNAMON PC product line**

- High liquefaction performance
- Good workability
- Robust application

## **DYNAMON NRG product line**

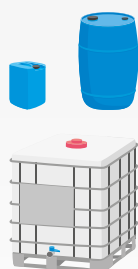
- The early strength is optimized to the best possible effect or combined with other properties

**Cremation Cemetery Strassgang**  
Dynamon PC 20 ES



## 2.2 SUPERPLASTICIZERS PRECAST CONCRETE

### 2.2.1 Dynamon NRG Line



#### Dynamon NRG 1010

Superplasticizer for saving water and achieving the highest early strength of the concrete. Superplasticizer with rapid hardening – even with earth-moist consistency.



• **Performance characteristics:**

- very high water reduction
- extremely high early strength

• **Base:** polycarboxylate ether

• **Density:** 1.03 – 1.07 g/cm<sup>3</sup>

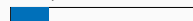
• **Colour:** milky white-yellow

• **Packaging:** 25 kg canisters, 210 kg barrels, 1050 kg IBC, loose

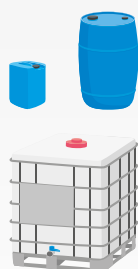
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon NRG 1014

Superplasticizer for saving water and achieving the highest early strength of the concrete. Superplasticizer with rapid hardening in all consistency classes.



• **Performance characteristics:**

- very high water reduction
- extremely high early strength

• **Base:** polycarboxylate ether

• **Density:** 1.03 – 1.07 g/cm<sup>3</sup>

• **Colour:** milky white-yellow

• **Packaging:** 25 kg canisters, 212 kg barrels, 1060 kg IBC, loose

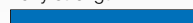
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon NRG 1020

Universal superplasticizer for saving water and achieving the highest early strength of the concrete. The combination of longer processability of concrete and lower adhesive strength of the concrete offers more flexibility in installation.



• **Performance characteristics:**

- very high water reduction
- extremely high early strength

• **Base:** polycarboxylate ether

• **Density:** 1.05 – 1.09 g/cm<sup>3</sup>

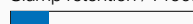
• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



## 2.2 SUPERPLASTICIZERS PRECAST CONCRETE

### 2.2.1 Dynamon NRG Line



#### Dynamon NRG 1030 AT



Universal superplasticizer for saving water and achieving the highest early strength of the concrete. The focus is on long workability as well as high microstructure stability of the concrete in all consistency classes. This combination of properties leads to the best visible surfaces with maximum flexibility in the finished parts plant.

• **Performance characteristics:**

- high water reduction
- long processability
- very good early strength
- high microstructure stability of the concrete in all consistency classes

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



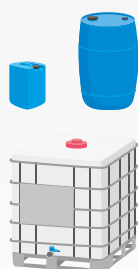
- **Base:** polycarboxylate ether
- **Density:** 1.03–1.07 g/cm<sup>3</sup>
- **Colour:** milky white-yellow
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose





## 2.2 SUPERPLASTICIZERS PRECAST CONCRETE

### 2.2.2 Dynamon PC Line



#### Dynamon PC 8480

Universal superplasticizer with very high water savings, sufficient consistency and good early strength.



• **Performance characteristics:**

- high water reduction
- long processability
- good early strength

• **Base:** polycarboxylate ether

• **Density:** 1.04 – 1.08 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

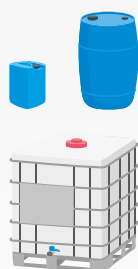
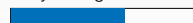
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon PC 220

Universal superplasticizer with very high water savings, good early strength and low adhesive strength of the fresh concrete. The concrete can be easily applied and further processed.



• **Performance characteristics:**

- very high water reduction
- very good early strength
- very low adhesive strength of the concrete

• **Base:** polycarboxylate ether

• **Density:** 1.05 – 1.09 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

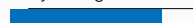
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon PC 222

Universal superplasticizer with very high water savings, good early strength and low adhesive strength of the fresh concrete. The concrete can be easily applied and further processed. The superplasticizer can be easily mixed in – even with earth-moist consistencies.



• **Performance characteristics:**

- very high water reduction
- very good early strength
- very low adhesive strength of the concrete

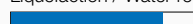
• **Base:** polycarboxylate ether

• **Density:** 1.03 – 1.07 g/cm<sup>3</sup>

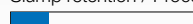
• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

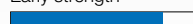
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



## 2.2 SUPERPLASTICIZERS PRECAST CONCRETE

### 2.2.2 Dynamon PC Line



#### Dynamon PC 222/30



Universal superplasticizer with very high water savings, good early strength and low adhesive strength of the fresh concrete. The concrete can be easily applied and further processed. The superplasticizer can be easily mixed in – even with earth-moist consistencies.

• **Performance characteristics:**

- very high water reduction
- very good early strength
- very low adhesive strength of the concrete

• **Base:** polycarboxylate ether

• **Density:** 1.04–1.08 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon PC 285



Universal superplasticizer with high water savings and good workability of the concrete at very low dosages.

• **Performance characteristics:**

- moderate water reduction
- very long workability
- low dosage

• **Base:** polycarboxylate ether

• **Density:** 1.06–1.10 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

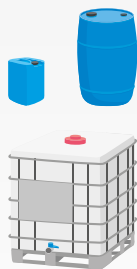
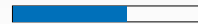
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



#### Dynamon PC 20 ES



Superplasticizer with good water savings and very good early strength.

• **Performance characteristics:**

- high water reduction
- very good early strength
- optimal microstructure stability in all consistency classes

• **Base:** polycarboxylate ether

• **Density:** 1.02–1.06 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete

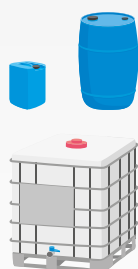


Early strength



## 2.2 SUPERPLASTICIZERS PRECAST CONCRETE

### 2.2.2 Dynamon PC Line



#### Dynamon PC 25 ES

Superplasticizer with good water savings and very good early strength.



• **Performance characteristics:**

- high water reduction
- very good early strength
- optimal microstructure stability in all consistency classes

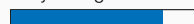
Liquefaction / Water reduction



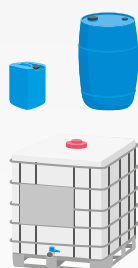
Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04 – 1.08 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Dynamon PC 30 ES

Superplasticizer with excellent water savings at low dosages.



• **Performance characteristics:**

- high water reduction
- very good early strength
- low dosage
- optimal microstructure stability in all consistency classes

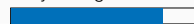
Liquefaction / Water reduction



Slump retention / Processability of concrete

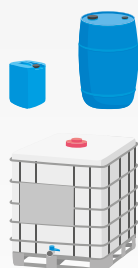


Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.05 – 1.09 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

### 2.2.3 Superplasticizers Lightweight Concrete



#### Dynamon PC Foam

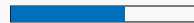
Superplasticizer with air-entraining effect for the production of lightweight concrete.



• **Performance characteristics:**

- high water reduction
- good early strength
- optimal microstructure stability in all consistency classes

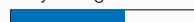
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.02 – 1.06 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

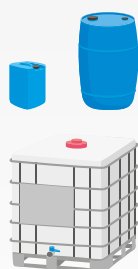


# SUPER- PLASTICIZERS SPRAYED CONCRETE

For optimal **SPRAYED CONCRETE**, it is necessary to have sufficient water reduction and a very long processability of concrete, as well as microstructural stabilization in very liquid fresh concrete consistencies. These characteristics are already inherent in the **DYNAMON LZ SP** product line.

If the mixture's properties are not sufficient to meet the requirements for cyclic tunnel excavation, the combination with a slump retention admixture-superplasticizer or **MAPETARD** retardant is possible. This results in an extremely long processability of concrete without disturbing the development of early strength after the addition of an accelerator.





### Dynamon LZ SP 11 conc.

Superplasticizer for sprayed concrete.



• **Performance characteristics:**

- long workability
- very good early strength
- good microstructure stability
- low dosage

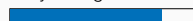
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04 – 1.08 g/cm<sup>3</sup>
- **Color:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



### Dynamon LZ SP W 20

Superplasticizer for sprayed concrete.



• **Performance characteristics:**

- very high water reduction
- very long slump retention and workability
- air-entraining action
- latest generation superplasticizer

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04 – 1.08 g/cm<sup>3</sup>
- **Color:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



### Dynamon LZ SX T5

Superplasticizer for sprayed concrete.



• **Performance characteristics:**

- high water reduction
- long workability
- good early strength

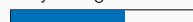
Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength



- **Base:** polycarboxylate ether
- **Density:** 1.04 – 1.08 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

# AIR-ENTRAINING ADMIXTURES

**AIR-ENTRAINING ADMIXTURES (LP)** must comply with the requirements of EN 934-2, Table 5 and introduce a certain amount of small, evenly distributed air pores that remain in the concrete after hardening. These pores act as an expansion space for freezing water within the concrete. This makes concrete frost-resistant with and without a thawing agent. These concrete requirements are necessary in building, road construction, tunnel construction and bridge construction.

Our air-entraining admixtures differ in the raw material composition and concentration:

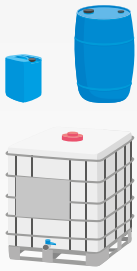
The **MAPEAIR LP 4 series** is produced with wood rosin.

The **MAPEAIR LP 100 series** are synthetic air-entraining admixtures.

The **MAPEAIR LP X9 series** stabilize the air content in fresh concrete, i.e. subsequent air increase is minimized – this provides safety in concrete production.

## 3 AIR-ENTRAINING ADMIXTURES

### 3.1 Flowable Concrete

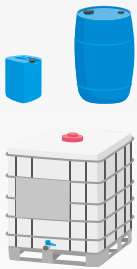


#### Mapeair LP 4

Air-entraining admixtures for the formation of an air-pore system in concrete based on wood rosin. Universally applicable in the production of frost resistant concretes.



- **Base:** wood rosin
- **Density:** 1.00–1.04 g/cm<sup>3</sup>
- **Color:** light brown
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



#### Mapeair LP 4/2

Strongly diluted air-entraining admixture for the formation of an air-pore system in concrete based on wood rosin.

Universally applicable in the production of frost resistant concretes.



- **Base:** wood rosin
- **Density:** 1.00–1.04 g/cm<sup>3</sup>
- **Color:** light brown
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose

## 3 AIR-ENTRAINING ADMIXTURES

### 3.1 Flowable Concrete



#### Mapeair LP 100

Synthetic air-entraining admixture for the formation of a very fine pored air-pore system in concrete. Universally applicable in the production of frost resistant concretes.



- **Basis:** synthetic surfactants
- **Density:** 1.00–1.04 g/cm<sup>3</sup>
- **Colour:** blue
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



#### Mapeair LP 200

Synthetic air-entraining admixture for the formation of a very fine pored air-pore system in concrete. **MAPEAIR LP 200** is slightly more concentrated and therefore more economical in dosage. Universally applicable in the production of frost resistant concretes.

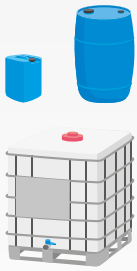


- **Basis:** synthetic surfactants
- **Density:** 0.99–1.03 g/cm<sup>3</sup>
- **Colour:** green
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



## 3 AIR-ENTRAINING ADMIXTURES

### 3.1 Flowable Concrete



#### Mapeair LP X7

Air-entraining admixtures for concrete – without post-activation.

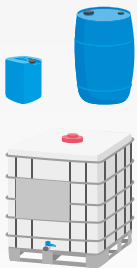
Diluted air-entraining admixture based on synthetic surfactants for easy dosing.

The further formulation prevents an increase in the air in the concrete by means of energy input, so that almost constant air content in the concrete can be achieved.

Universally applicable in the production of frost resistant concretes.



- **Basis:** synthetic surfactants
- **Density:** 0.98–1.02 g/cm<sup>3</sup>
- **Colour:** orange
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



#### Mapeair LP X9

Air-entraining admixture for concrete – without post-activation.

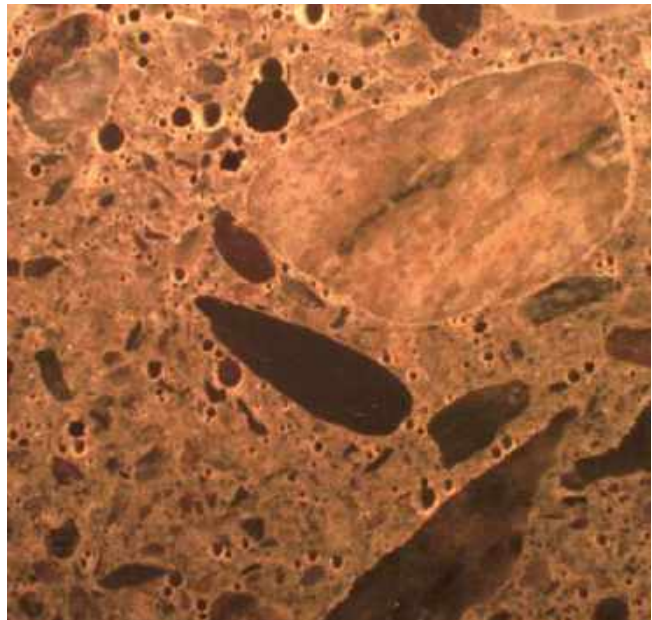
Air-entraining admixture based on synthetic surfactants. The further formulation prevents an increase in the air in the concrete by means of energy input, so that almost constant air content in the concrete can be achieved.

Universally applicable in the production of frost resistant concretes.



- **Basis:** synthetic surfactants
- **Density:** 0.98–1.02 g/cm<sup>3</sup>
- **Colour:** orange
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

LP distribution



## 3 AIR-ENTRAINING ADMIXTURES

### 3.2 Earth-Moist Concrete / Lightweight Concrete



#### Mapeair LP 4/10

Concentrated air-entraining admixture for the formation of a very fine pored air-pore system in concrete. **MAPEAIR LP 4/10** allows for more economical dosages with stiff concretes. For the production of earth-moist, frost-resistant concrete.

- **Base:** wood rosin
- **Density:** 1.00–1.04 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



#### Mapeair LP 400

Concentrated, synthetic air-entraining admixture for the formation of a very fine pored air-pore system in concrete. **MAPEAIR LP 400** allows for more economical dosages with stiff concretes. For the production of earth-moist, frost-resistant concrete.

- **Base:** synthetic surfactants
- **Density:** 1.00–1.04 g/cm<sup>3</sup>
- **Colour:** green
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



#### Mapeair LP 800

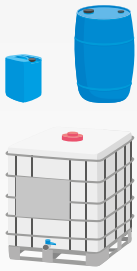
Concentrated, synthetic air-entraining admixture for the formation of a very fine pored air-pore system in concrete. Mapeair LP 800 allows for more economical dosages with stiff concretes. For the production of earth-moist, frost-resistant concrete.

- **Base:** synthetic surfactants
- **Density:** 0.99–1.03 g/cm<sup>3</sup>
- **Colour:** green
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



## 3 AIR-ENTRAINING ADMIXTURES

### 3.2 Earth-Moist Concrete / Lightweight Concrete

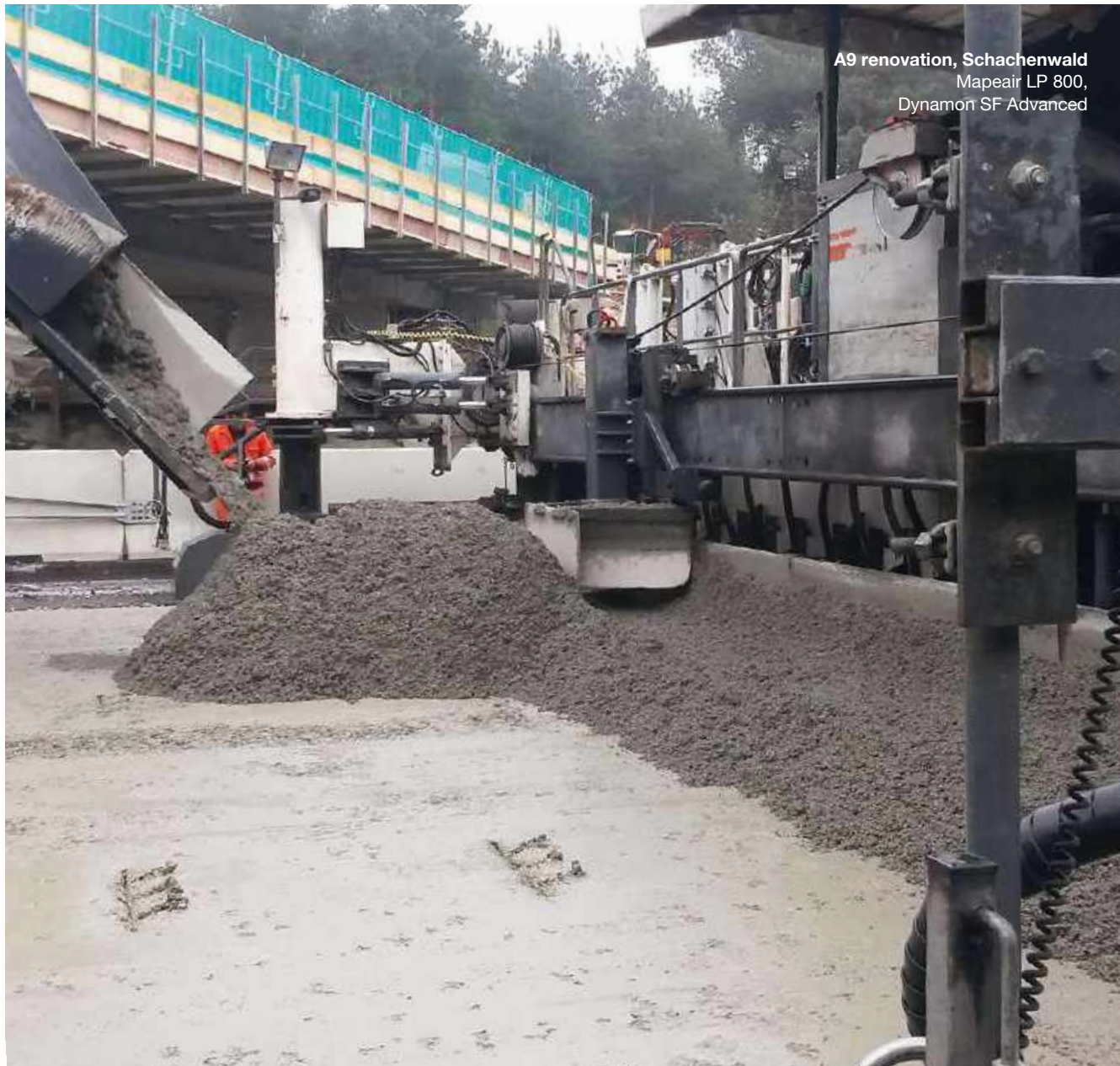


#### Mapeair LP 1600

Highly concentrated, synthetic air-entraining admixture for the formation of a very fine pored air-pore system in concrete. For the production of earth-moist, frost-resistant concrete or lightweight concrete.



- **Base:** synthetic surfactants
- **Density:** 1.00–1.04 g/cm<sup>3</sup>
- **Colour:** green
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



A9 renovation, Schachenwald  
Mapeair LP 800,  
Dynamon SF Advanced

## 3 AIR-ENTRAINING ADMIXTURES

### 3.3 Special Applications for Mortar / Paving Stones



#### Mapeair MZS 48

Mortar additive with retardant action.

Product combining air-entraining agents and a special retardant for mortars with very long workability. For the production of ready-made mortar.



- **Base:** surfactant-retardant combination
- **Density:** 1.11 – 1.15 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



#### Mapeair LA/L

air-entraining admixture for lightweight concrete with foam-stabilizing action.

For the production of lightweight concrete, mortar or foamed concrete.

- **Base:** special air-entraining agent
- **Density:** 1.08 – 1.12 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 231 kg barrels, 1155 kg IBC, loose



#### Mapeair Foaming Agent T

Highly concentrated, synthetic air-entraining admixture for lightweight concrete or mortar. Also suitable for dosing with a foam cannon. For the production of earth-moist, frost-resistant concrete or lightweight concrete.

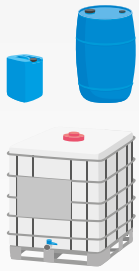


- **Base:** synthetic surfactants
- **Density:** 1.01 – 1.05 g/cm<sup>3</sup>
- **Colour:** transparent
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



## 3 AIR-ENTRAINING ADMIXTURES

### 3.3 Special Applications for Mortar / Paving Stones



#### Mapeair LPV 450

Air-entraining admixture with a plasticizing action. **MAPEAIR LPV 450** combines a plasticizing action with the formation of an air pore system in mortar and concrete. Is particularly suitable for the production of mortars used in the production of paving stones.



- **Base:** lignin-surfactant combination
- **Density:** 1.07 – 1.13 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Washed Concrete Slabs





# RETARDANTS

**RETARDANTS (VZ)** must meet the requirements of EN 934-2, Table 8. A retardant is defined as follows: "An additive that extends the time from the beginning of the transition of the mixture from the plastic to the solid state". Retardants are added between 0.2 and 2.0 m% – based on the cement weight – to the concrete or mortar, depending on the processability of concrete required.

**Semmering Base Tunnel**  
Retardants: Mapetard VZ M



## APPLICATIONS

Our retardants can be used in ready-mixed concrete requiring longer transportation times; casting at high temperatures; as a temporary filler during breaks in casting as well as for casting large monolithic construction elements.

## MAPETARD SERIES

The most universal product is **MAPETARD VZ**. It is easy to use and powerful. This retardant is different from other retardants due to the raw material used.

**MAPETARD D** is manufactured on a phosphate basis and, like **MAPETARD VZ P**, is approved in Germany according to ZTV-Ing.

**MAPETARD VZ M** is a highly concentrated retardant for special applications.

## ADVANTAGES OF RETARDANTS

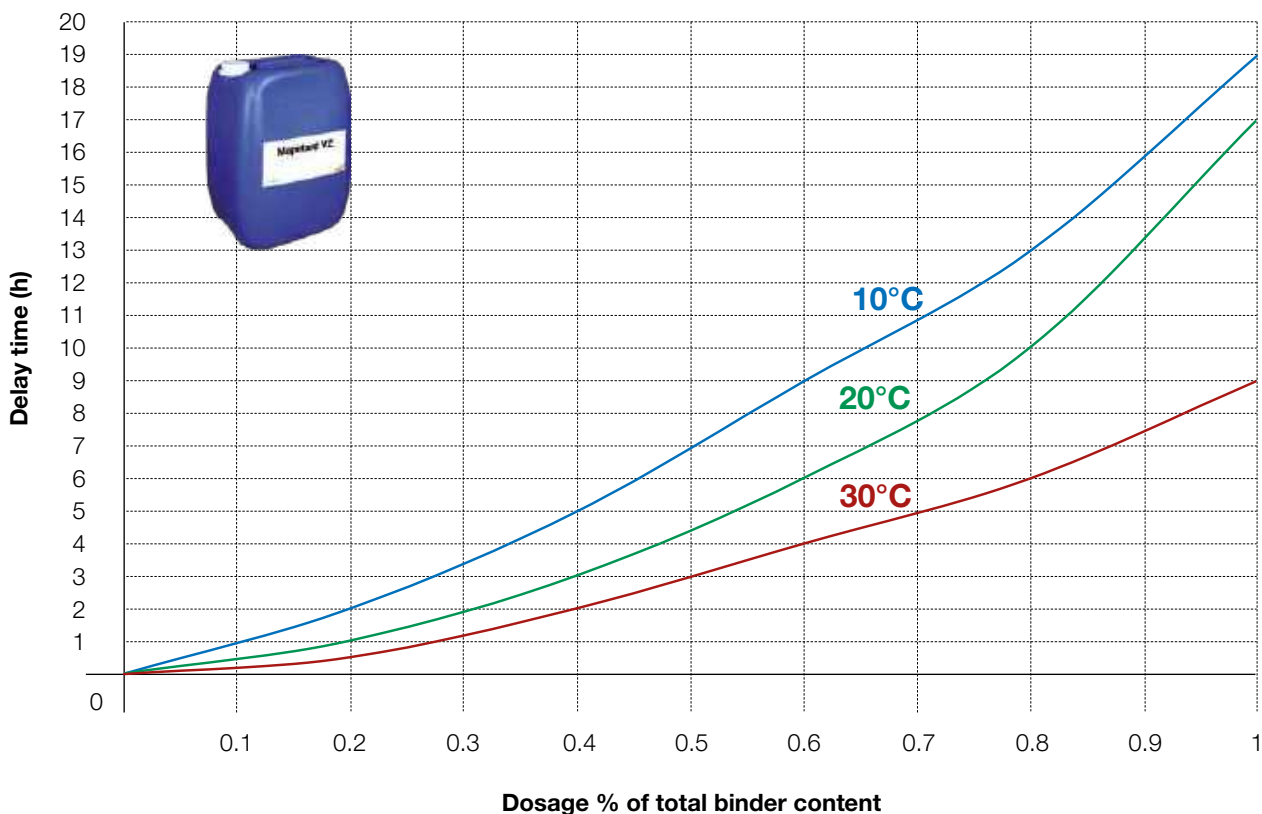
- they result in an extension of the processability of concrete and/or a delay of the initial hardening
- they can be used in ready-mixed concrete with a long transportation time to the construction site
- the processability of sprayed concrete can be significantly increased
- depending on the dosage, the reaction of the cement with water and the temperature development, i.e. the start of solidification, is delayed



The retarding action must be determined by means of initial tests before the application of the respective product and can be estimated from the delay table.

## DELAY-TIMES MAPETARD VZ

Principal action of **MAPETARD VZ** retardant depending on dosage and temperature





### Mapetard VZ

Universal concrete retardant for the extension of the processability of concrete and/or a delay of the initial hardening.



• **Applications:**

- long transport times to the construction site
- concrete at high outside temperatures
- to bridge pauses in casting
- long processability of sprayed concrete

• **Base:** combination of retardant substances

• **Density:** 1.04–1.08 g/cm<sup>3</sup>

• **Color:** red

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



### Mapetard VZ P

Concrete retardants approved according to ZTV-Ing. For extending processability and for delaying the initial hardening.



• **Applications:**

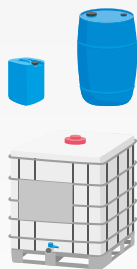
- long transport times to the construction site
- concrete at high outside temperatures
- to bridge pauses in casting

• **Base:** combination of retardant substances

• **Density:** 1.08 – 1.14 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



### Mapetard VZ M

Universal concrete retardant for the extension of the processability of concrete and/or a delay of the initial hardening.



• **Applications:**

- long transport times to the construction site
- concrete at high outside temperatures
- long processability of sprayed concrete
- retardant action for ready-mixed mortars

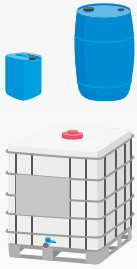
• **Basis:** hardening-retarder substance

• **Density:** 1.13–1.19 g/cm<sup>3</sup>

• **Colour:** brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose





### Mapetard D

Concrete retardants approved according to ZTV-Ing. For extending processability and for delaying the initial hardening.



- **Applications:**

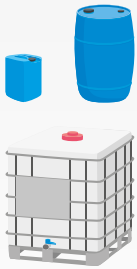
- long transport times to the construction site
- concrete at high outside temperatures
- to bridge breaks in casting
- long processability of sprayed concrete

- **Base:** phosphates

- **Density:** 1.11 – 1.17 g/cm<sup>3</sup>

- **Colour:** colourless

- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



### Mapetard SD 2000

Concrete retardants approved according to ZTV-Ing. For extending processability and for delaying the initial hardening.



- **Applications:**


- very long retarding action in concrete for special applications
- long processability of sprayed concrete

- **Base:** hardening-retarder substance

- **Density:** 1.08 – 1.14 g/cm<sup>3</sup>

- **Colour:** yellowish

- **Packaging:** 25 kg canisters, 222 kg barrels, 1110 kg IBC, loose



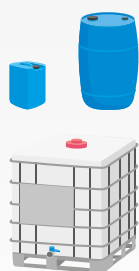
Noise barrier  
Tauernautobahn A10  
Mapefast Ultra

# ACCELERATORS

**HARDENING ACCELERATORS** must comply with the requirements of EN 934-2 Table 7 and increase the early strength, with or without influence on the setting time. The dormant phase of cement hydration is shortened and the hardening is accelerated. This enables higher early strength or concrete casting at lower ambient temperatures.

The types differ in terms of acceptable processability of concrete of the fresh concrete and an immediate solidification after the addition of the accelerator.

In most cases, the accelerators are chloride-free, so that there is no risk of corrosion on the reinforcement in the concrete.



### Mapefast C

Effective accelerator for unreinforced concrete.



• **Performance characteristics:**

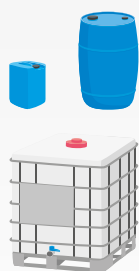
- very high early strength (also < 6 hours)
- unreinforced foundations
- very economical

• **Base:** calcium chloride

• **Density:** 1.31 – 1.37 g/cm<sup>3</sup>

• **Colour:** transparent

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



### Mapefast CF 1

Universal accelerator for ready-mixed concrete.



• **Performance characteristics:**

- acceleration of cement hydration
- concrete layers at low outside temperatures
- sufficient processability of concrete for fresh concrete
- chloride-free – can be used for reinforced concrete

• **Base:** calcium nitrate

• **Density:** 1.39 – 1.45 g/cm<sup>3</sup>

• **Colour:** yellowish – light brown

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



### Mapefast WG

Universal accelerator.



• **Performance characteristics:**

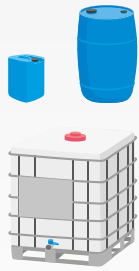
- acceleration of cement hydration
- high dosages lead to solidification
- chloride-free – can be used for reinforced concrete

• **Base:** water glass solution

• **Density:** 1.33 – 1.39 g/cm<sup>3</sup>

• **Colour:** transparent

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



### Mapefast Ultra

Very effective accelerator for precast and ready-mixed concrete.

**MAPEFAST ULTRA** has been approved by the DIBt.



• **Performance characteristics:**

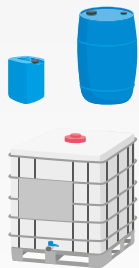
- very high early strength (also < 6 hours)
- good action at low temperatures
- rapid further processing of green concrete
- sufficient processability of concrete for fresh concrete
- chloride-free – can be used for reinforced concrete

• **Base:** CSH phases

• **Density:** 1.10–1.16 g/cm<sup>3</sup>

• **Colour:** blue

• **Packaging:** 25 kg canisters, 226 kg barrels, 1130 kg IBC, loose



### Dynamon HAA

Universal accelerator for precast and ready-mixed concrete.



• **Performance characteristics:**

- high early strength
- good action at low temperatures
- rapid further processing of green concrete
- sufficient processability of concrete for fresh concrete
- chloride-free – can be used for reinforced concrete

• **Base:** combination of retardant substances

• **Density:** 1.25–1.31 g/cm<sup>3</sup>

• **Colour:** light yellow

• **Packaging:** 30 kg canisters, 257 kg barrels, 1285 kg IBC, loose



Curbs  
Mapefast C



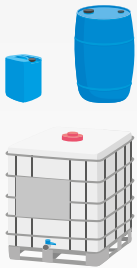


# STABILIZERS

The retention capacity of fresh concrete is increased by the addition of **VISCOSITY MODIFIERS** or **STABILIZERS**. This can prevent deficiencies in the microstructure stability of the structure, water separation (bleeding) or the mixing. Stabilizers help with pump concrete, underwater concrete, pile concrete, self-compacting concrete (SCC) and lightweight concrete.

**Guggenheim Museum**  
Viscostar 3K

G U G G E N H E I M M U S E U M



### Viscostar 3K

Viscosity modifying admixture for highly liquefied concrete.



• **Performance characteristics:**

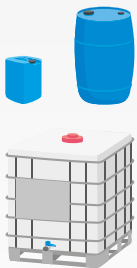
- safe production of very soft concrete (SCC, pile,...)
- little influence on the fresh concrete consistency
- good final strength

• **Base:** polymer

• **Density:** 0.99 – 1.03 g/cm<sup>3</sup>

• **Colour:** transparent

• **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



### Viscostar Easy

Viscosity modifying admixture for concrete.



• **Performance characteristics:**

- safe production of very soft concrete (SCC, pile,...)
- little influence on the fresh concrete consistency
- simple dosage

• **Base:** methyl cellulose

• **Density:** 1.00 – 1.04 g/cm<sup>3</sup>

• **Colour:** white

• **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



### Viscostar Strong

Viscosity modifying admixture for concrete.



• **Performance characteristics:**

- safe production of very soft concrete (SCC, pile,...)
- little influence on the fresh concrete consistency
- good final strength

• **Base:** methyl cellulose

• **Density:** 1.00 – 1.04 g/cm<sup>3</sup>

• **Colour:** white

• **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



### Viscostar Strong P

Stabilizer for fresh concrete.



- **Performance characteristics:**

- suitable for underwater concrete
- reduces the consistency
- microstructural stabilization of strongly liquefied concrete
- effectively prevents bleeding
- reduces final strength

- **Base:** methyl cellulose

- **Colour:** white powder

- **Packaging:** 20 kg bags



### Mapeplast UW

Stabilizer for fresh concrete.



- **Performance characteristics:**

- suitable for underwater concrete
- microstructure stabilization of strongly liquefied concrete
- high final strength
- easy dosing

- **Base:** methyl cellulose

- **Colour:** white powder

- **Packaging:** 4x3 kg water-soluble bags in a box, 14 kg bag



**Rialto Bridge**  
Mapefast UW





# FIBRES

**FIBRES** are mixed into the fresh concrete to increase the tensile strength and deformability of the solid concrete and to reduce the formation of cracks.

**Warehouse and factory hall Feingruber**  
Mapefibre ST50 Twisted



## 7 FIBRES

### 7.1 Steel Wire Fibres

#### STEEL WIRE FIBRES

- Increase the resistance to pressure, bending tension, and splitting
- Ensure that the crack widths of the concrete are limited

A static calculation of the component serves as proof of how far conventional reinforcements can be replaced. This allows the casting work on the construction site (e.g.: industrial floors) to be carried out in shorter time.



#### Steelfibre DE 35/0,55 N

Structurally effective steel wire fibre to improve the mechanical properties of concrete. Reinforcement for sprayed concrete (e.g.: on a slope) or for thin concrete layers.



- **Length:** 35 mm
- **Diameter:** 0.55 mm
- **Colour:** grey
- **Recommended dosage** 10–40 kg/m<sup>3</sup> concrete
- **Packaging:** 20 kg bags



#### Steelfibre DE 50/1 N

Structurally effective steel wire fibre to improve the mechanical properties of concrete. Reinforcement for industrial floors.



- **Length:** 50 mm
- **Diameter:** 1 mm
- **Colour:** grey
- **Recommended dosage** 10–40 kg/m<sup>3</sup> concrete
- **Packaging:** 25 kg bags

## 7 FIBRES

### 7.2 Macrofibres

#### MACROFIBRES

Plastic fibres are structurally effective as macrofibres and contribute to the structural strength of the component. The macro fibres are pressed into individual rolls to simplify portioning.



#### Mapefibre IT 39 NV

Structurally effective PP macrofibres to improve the mechanical properties and energy absorption of concrete.

Especially suitable for sprayed concrete.



- **Length:** 55 mm
- **Colour:** orange
- **Recommended dosage** 1–5 kg/m<sup>3</sup> concrete
- **Packaging:** rolls packed in plastic bags of 6 kg each, other packaging sizes on request



#### Mapefibre ST42

Structurally effective PP macrofibres to improve the mechanical properties and energy absorption of concrete.



- **Length:** 42 mm
- **Colour:** grey
- **Recommended dosage** 1–6 kg/m<sup>3</sup> concrete
- **Packaging:** rolls packed in plastic bags of 6 kg each, other packaging sizes on request



## 7 FIBRES

### 7.2 Macrofibres

**NEW**



#### Mapecfibre ST 50 Twisted

Flexible structurally effective PP macrofibres for industrial flooring.

The flexible **MAPEFIBER ST50 TWISTED** makes a better and easier processing of the concrete surface possible, since the rigid ends do not protrude from the concrete. With **MAPEFIBER ST50 TWISTED**, concrete surfaces can be smoothed more easily.



- **Length:** 50 mm
- **Colour:** grey
- **Recommended dosage:** 1–6 kg per m<sup>3</sup> of concrete
- **Packaging:** plastic bag of 3kg

### 7.3 Microfibres

#### MICROFIBRES

Plastic fibres as monofilament. Fibres reduce the shrinkage and cracking of the concrete surface.



#### Mapecfibre NS12

PP monofilament fibre to reduce early shrinkage in concrete.



- **Length:** 12 mm
- **Colour:** white
- **Recommended dosage:** 0.6 kg/m<sup>3</sup>
- **Packaging:** 30x600 g water-soluble bags per box



# FORM-RELEASE COMPOUNDS

**FORM-RELEASE COMPOUNDS** prevent the concrete from adhering to the formwork surface and allow for easy form removal of the component. A thin and uniform application ensures good surface quality and equal colouration. This enables visually demanding facing concrete.

MAPEI offers suitable products for many formwork surfaces and applications.

## 8. FORM-RELEASE COMPOUNDS

### VARIOUS OILS

#### Base: mineral oils

- with or without additives
- widely applicable and robust

#### Base: rapeseed oils

- either as oil or as an aqueous emulsion
- due to ecological aspects and industrial hygiene

### FORMWORK MATERIAL

#### • absorbent surfaces

e.g.: wood, ...

#### • non-absorbent material

e.g.: steel, plastic, coated wood, ...

### COMPARISON OF FORM-RELEASE COMPOUNDS

Form-release compounds	Application	Base	Corrosion protection	Application	Wood-Non-absorbent	Wood Absorbent	Steel	Phenolic resin	Plastic
<b>Mapeform DMA 100</b>	Building construction, Precast concrete plant	Mineral oil	no	Brushes, Spray, Rollers	yes	yes	yes	yes	yes
<b>Mapeform Solvent Uni</b>	Building construction, Precast concrete plant	Mineral oil	no	Brushes, Spray, Rollers	yes	yes	yes	yes	yes
<b>Mapeform Solvent High RP</b>	Building construction, Precast concrete plant	Mineral oil, solvent-based	yes	Spray	yes	no	yes	yes	no
<b>Mapeform ECO Oil</b>	Building construction, Precast concrete plant	Rapeseed oil	no	Brushes, Spray, Rollers	yes	yes	yes	yes	yes
<b>Mapeform ECO 31</b>	Precast concrete plant	Organic Emulsion	no	Brushes, Spray, Rollers	no	no	yes	yes	no
<b>Mapeform ECO 91</b>	Precast concrete plant	Organic Emulsion	no	Brushes, Spray, Rollers	no	no	yes	yes	no
<b>Mapeform W 60</b>	Precast concrete plant	Wax	no	Brushes, Spray	no	no	yes	yes	yes

## 8 FORM-RELEASE COMPOUNDS

### 8.1 Mineral Oil



#### Mapeform DMA 100

Economical, robust form-release compound for use on construction sites and in precast concrete plants.

• **Applications:**

- for absorbent and non-absorbent formwork
- for heated and unheated formwork
- for the protection of formwork and machinery

• **Performance characteristics:**

- solvent-free

• **Base:** mineral oil

• **Density:** ~0.90 g/cm<sup>3</sup>

• **Colour:** yellow

• **Consumption:**

- absorbent 35–60 g/m<sup>2</sup>
- non-absorbent 25–40 g/m<sup>2</sup>

• **Packaging:** 25 l canister, 210 l, drum, 1000 l IBC



#### Mapeform Solvent Uni

Universal, mineral oil-based form-release compound for sophisticated constructions and in precast concrete plants.

• **Applications:**

- for low absorbent and non-absorbent formwork
- for heated and unheated formwork
- for the protection of formwork and machinery

• **Performance characteristics:**

- solvent-free

• **Base:** Mineral oil

• **Density:** ~0.86 g/cm<sup>3</sup>

• **Colour:** yellow

• **Consumption:**

- absorbent 35–60 g/m<sup>2</sup>
- non-absorbent 25–40 g/m<sup>2</sup>

• **Packaging:** 25 l canister, 200 l drum, 1000 l IBC



#### Mapeform Solvent High RP

High-quality form-release compound for the highest demands on facing concrete quality in precast concrete plants.

• **Applications:**

- for absorbent and non-absorbent formwork
- for heated and unheated formwork
- for the protection of formwork and machinery

• **Performance characteristics:**

- low viscosity for optimum application
- integrated corrosion protection

• **Base:** mineral oil, solvent-based

• **Density:** ~0.79 g/cm<sup>3</sup>

• **Colour:** yellow

• **Consumption:**

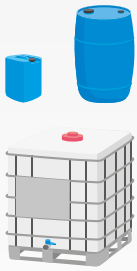
- absorbent 35–60 g/m<sup>2</sup>
- non-absorbent 25–40 g/m<sup>2</sup>

• **Packaging:** 20 l canister, 200 l, drum, 1000 l IBC



## 8 FORM-RELEASE COMPOUNDS

### 8.1 Mineral Oil



#### Mapeform ECO Oil

Universal, organic form-release compound for building construction and precast concrete plants based on rapeseed oil.

• **Applications:**

- formwork materials: steel, aluminium, plastic, wood-
- for cavity-free concrete surfaces
- for the protection of formwork and equipment

• **Performance characteristics:**

- application preferably by spraying
- quickly biodegradable

• **Base:** rapeseed oil

• **Density:** ~0.91 g/cm<sup>3</sup>

• **Colour:** brown

• **Consumption:** spray 15–25 g/m<sup>2</sup> (>6 bar)

• **Packaging:** 25 l canister, 200 l drum, 1000 l IBC

#### TEST SERVICES

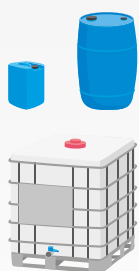
We carry out building material tests on site or in our own test laboratories. Our offer includes testing of:

- Aggregates
- Fresh Concrete
- Sprayed concrete according to RL Sprayed Concrete
- Solid Concrete
- Binders
- Concrete Repair Mortar



Our partnerships p. 4

### 8.2 Emulsion



#### Mapeform ECO 31

Universal, organic form-release compound for precast concrete plants based on rapeseed oil.

- **Applications:**

- formwork materials: steel, aluminium, plastic
- also suitable for vertical formwork without droplet formation

- **Performance characteristics:**

- application preferably by spraying
- quickly biodegradable

- **Base:** rapeseed oil emulsion in water

- **Density:**  $\sim 0.96 \text{ g/cm}^3$

- **Colour:** white

- **Consumption:** spray  $15\text{--}25 \text{ g/m}^2$  ( $> 6 \text{ bar}$ )

- **Packaging:** 25 l canister, 200 l drum, 1000 l IBC



#### Mapeform ECO 91

Universal, organic form-release compound for precast concrete plants based on rapeseed oil.

- **Applications:**

- formwork materials: steel, aluminium, plastic
- for horizontal and vertical formwork

- **Performance characteristics:**

- application preferably by spraying
- quickly biodegradable

- **Base:** rapeseed oil emulsion in water

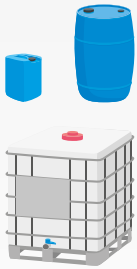
- **Density:**  $\sim 0.96 \text{ g/cm}^3$

- **Colour:** white

- **Consumption:** spray  $15\text{--}25 \text{ g/m}^2$  ( $> 6 \text{ bar}$ )

- **Packaging:** 25 l canister, 200 l drum, 1000 l IBC

### 8.3 Special Application



#### Mapeform W60

Wax – liquid dispersion of silicones and wax.

• **Applications:**

- for non-absorbent formwork
- for heated and unheated formwork

• **Performance characteristics:**

- for the protection of formwork and equipment

• **Base:** silicone and wax

• **Density:** 0.97 – 1.09 g/cm<sup>3</sup>

• **Colour:** white

• **Consumption:** < 50 g/m<sup>2</sup>

• **Packaging:** 20 l canister, 200 l drum, 1000 l IBC



#### Mapeform Mixer Protection Agent 500

Mixer and machine protection for the concrete processing industry and also for immediate use after wet cleaning.

• **Applications:**

- for the protection of formwork and equipment

• **Performance characteristics:**

- application on dry and wet surfaces possible
- no air entrained into the concrete

• **Base:** Mineral oil

• **Density:** ~0.86 g/cm<sup>3</sup>

• **Colour:** yellow

• **Consumption:** ~1 – 3 l for 40 m<sup>2</sup>

• **Packaging:** 20 kg canisters, 180 kg barrels, 860 kg IBC, loose

**NEW**



#### Mapeform Mixer Protection Agent 700

Environmentally friendly mixer protection, free of solvents or mineral oil.

• **Applications:**

- non-toxic and readily biodegradable mixer protection for cleaning and maintenance of concrete mixing tools

• **Performance characteristics:**

- application on formwork surfaces or mixing tools
- also possible in wet conditions

• **Base:** oils based on renewable raw materials

• **Density:** ~0.89 g/cm<sup>3</sup>

• **Colour:** yellow

• **Consumption:** ~1 – 3 l for 40 m<sup>2</sup>

• **Packaging:** 20 l canister, 200 l drum, 1000 l IBC



# SPECIAL PRODUCTS

Concrete additives according to EN934-2 endow concrete with various properties – but sometimes more is required in modern concrete technology.

## **SPECIAL PRODUCTS ...**

- change the fresh concrete and influence the setting
- help with post-treatment
- improve the properties of the concrete or concrete surface

**MAPEI** sees itself as a “system supplier” for the concrete customer, in order to be able to offer a suitable additive solution for as many applications as possible.



### 9.1 Concrete remover



#### Mapeclean Concrete Remover

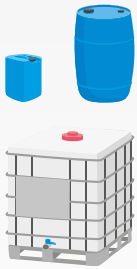
**MAPECLEAN CONCRETE REMOVER** is a concentrated acidic cleaner for removing concrete and mortar crusts and/or cement residue.

- **Performance characteristics:**

- very effective
- contains chloride

- **Colour:** white - yellow

- **Packaging:** 30 kg canister



#### Mapeclean Concrete Remover 400

**MAPECLEAN CONCRETE REMOVER** is a concentrated acidic cleaner for removing concrete and mortar crusts and/or cement residue.

- **Performance characteristics:**

- rapidly biodegradable
- chloride-free

- **Colour:** transparent

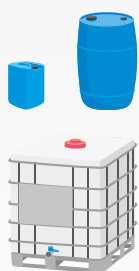
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose



For further products or tailor-made additive solutions for your concrete, please contact one of our sales consultants or inform yourself at [www.mapei.at](http://www.mapei.at)

## 9 SPECIAL PRODUCTS

### 9.2 Mass Hydrophobic Treatment



#### Idrocrete DM 30

**IDROCRETE DM 30** is a hydrophobising emulsion for reduced capillary activity in the core of the concrete. This greatly limits possible contamination and efflorescence.



- **Base:** calcium stearate
- **Density:** 0.99–1.03 g/cm<sup>3</sup>
- **Colour:** white
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC, loose



#### Idrocrete HP

Mass hydrophobisation based on silicon compounds.

Hydrophobising anti-efflorescence emulsion for reduced capillary activity in the core of the concrete. Severely limits possible contamination and efflorescence – without reducing the final strength of the concrete.



- **Base:** silicon compounds
- **Density:** 0.98–1.02 g/cm<sup>3</sup>
- **Colour:** amber
- **Packaging:** 25 kg canisters, 204 kg barrels, 1020 kg IBC, loose

## 9 SPECIAL PRODUCTS

### 9.3 Surface Hydrophobic Treatment



#### Mapecrete Stain Protection

Very effective, oil-repellent surface impregnation of concrete in an aqueous solution with anti-stain treatment.

- **Performance characteristics:**
  - oil resistant
  - anti-stain treatment for concrete
- **Base:** modified organic polymers
- **Density:** 1.0 g/cm<sup>3</sup>
- **Colour:** transparent
- **Consumption:** 0.1–0.3 kg/m<sup>2</sup>
- **Packaging:** 25 kg canister



#### Mapecrete Cream Protection

Very effective surface impregnation of concrete.  
Solvent-free, aqueous silane-based impregnating cream.

- **Properties:** solvent-free
- **Base:** silane
- **Density:** 0.90 g/cm<sup>3</sup>
- **Color:** yellowish white, creamy
- **Penetration Depth:** ≥10 mm class 2
- **Application:** roller, brush or preferably spraying
- **Consumption:** 0.1–0.4 kg/m<sup>2</sup>
- **Packaging:** 25 kg container, other container sizes on request



#### Antipluvio S

Very effective surface impregnation of concrete.  
Reduces the ingress of water and foreign substances into the concrete.  
Improves the durability and surface aesthetics of concrete.

- **Base:** siloxane
- **Density:** 0.8 g/cm<sup>3</sup>
- **Colour:** transparent
- **Application temperature:** +8 °C to +30 °C
- **Application:** roller, brush or preferably spraying
- **Consumption:** 0.1–1 kg/m<sup>2</sup>
- **Packaging:** 10 kg drums





### 9.4 Screed Supplement



#### Mapescreed 718

Universal solution for accelerated setting of floating screed and bonded screed through water saving.

- **Density:** 1.02–1.06 g/cm<sup>3</sup>
- **Colour:** brown
- **Recommended dosage:** 0.5–1.5% of the cement weight
- **Packaging:** 25 kg canister



#### Mapescreed GD 06

Universal solution for accelerated setting of floating screed and bonded screed.

- **Performance characteristics:**
  - ready-mixed paste with integrated PP fibres
  - integrated protection from rewetting and initial shrinkage cracks
  - detectable in the screed
- **Colour:** blue (ready-mixed paste)
- **Recommended dosage:** 1–3% of the cement weight
- **Packaging:** 25 kg container

**NEW**

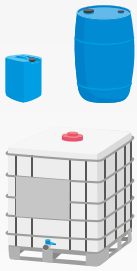


#### Mapescreed Advance CR

Special additive for cement screeds for reducing the shrinkage and minimising cupping (curling reduction).

- **Performance characteristics:**
  - high dimensional stability
  - reduction of cupping
  - rapid drying out due to water saving
  - improved workability
  - detectable in the hardened screed
- **Colour:** dark red to brown
- **Density:** 0.97–1.01 g/cm<sup>3</sup>
- **Recommended dosage:** 1–2% of the cement weight
- **Packaging:** 25 kg canister

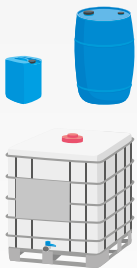
### 9.5 Follow-Up Treatment



#### Mapecure E

Concentrated, solvent-free paraffin-based evaporation protection for screed and concrete surfaces. Protects the surfaces from rapid water withdrawal and cracking.

- **Base:** paraffin
- **Density:** 0.92–0.96 g/cm<sup>3</sup>
- **Colour:** white
- **Mixing Ratio:** 1:1 dilutable
- **Consumption diluted:** 140–200 g/m<sup>2</sup>
- **Packaging:** 25 kg canisters, 190 kg barrels, 940 kg IBC



#### Mapecure E30

Ready-mixed solvent-free paraffin-based evaporation protection for screed and concrete surfaces. Protects the surfaces from rapid water withdrawal and cracking.

- **Classification** according to RVS 11.064
- **Base:** paraffin
- **Density:** 0.96–1.00 g/cm<sup>3</sup>
- **Colour:** white
- **Consumption:** 100–250 g/m<sup>2</sup>
- **Packaging:** 25 kg canisters, 194 kg barrels, 940 kg IBC



#### Mapecure WG

Ready-to-use, solvent-free evaporation protection for concrete surfaces. Protects the surfaces from rapid water withdrawal and cracking. Acts as a primer for subsequent treatment (further casting, coating, etc.) and does not need to be removed.

- **Approval** according to ASTM C156; ASTM C309 Type1-Class A
- **Base:** aqueous emulsion
- **Density:** 1.03–1.07 g/cm<sup>3</sup>
- **Colour:** white
- **Application** Roll or spray
- **Consumption:** 150–200 g/m<sup>2</sup>
- **Packaging:** 25 kg canister

## 9 SPECIAL PRODUCTS

### 9.5 Follow-Up Treatment



#### Mapecrete Film

Dilutable surface finishing aid and evaporation retarding agent for concrete surfaces.

**MAPECRETE FILM** simplifies surface treatment and reduces water evaporation.

- **Density:** 0.98–1.02 g/cm<sup>3</sup>
- **Colour:** blue
- **Mixing Ratio:** 1 part **MAPECRETE FILM**-9 parts water
- **Consumption:** 1 litre for 5-10m<sup>2</sup> per spray
- **Packaging:** 25 kg canister

### 9.6 Pumping Aid



#### Mapestart 1

Pumping aid admixture to facilitate the concrete pumping starting process.

- **Application:**
  - Mix with approx. 20 l of water and press through the pump line in front of the concrete
- **Performance characteristics:**
  - lubricates the lines
  - reduces wear
  - prevents clogging
- **Base:** cellulose
- **Colour:** white powder
- **Packaging:** 225 g bags



#### Mapeplast Pumping Aid Admixture

Addition to optimize and facilitate the pumping process of concrete.

- **Application:**
  - also suitable for lightweight concrete
- **Performance characteristics:**
  - significantly stabilises the concrete microstructure
  - reduces wear
  - prevents clogging
- **Base:** cellulose
- **Colour:** white powder
- **Recommended dosage:** 0.5–1.0 kg/cm<sup>3</sup>
- **Packaging:** 20 kg bags

## 9 SPECIAL PRODUCTS

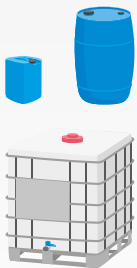
### 9.7 Shrinkage Reducing Admixtures



#### Mapecure SRA

Additive for reducing hydraulic shrinkage and crazing. Very good shrinkage reduction in mortar and concrete.

- **Density:** 0.89–0.93 g/cm<sup>3</sup>
- **Colour:** colourless liquid
- **Consumption:**
  - for mortar 0.25–0.5% by weight of the mixture
  - for concrete 5–8 l/m<sup>3</sup>
- **Packaging:** 20 kg canisters, 940 kg IBC



#### Mapecure SRA 20

Additive for reducing hydraulic shrinkage and crazing.



- **Characteristics:** very economical
- **Density:** 0.98–1.02 g/cm<sup>3</sup>
- **Colour:** yellowish liquid
- **Consumption:** 1–2% of the cement weight
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC



#### Mapecure SRA 25

Additive for reducing hydraulic shrinkage and crazing.

- **Performance characteristics:** very economical
- **Density:** 0.97 – 1.01 g/cm<sup>3</sup>
- **Colour:** yellowish liquid
- **Consumption:** 1 – 2% of the cement weight
- **Packaging:** 25 kg canisters, 200 kg barrels, 1000 kg IBC



### 9.8 Consistency Correction in the Truck Mixer



#### Dynamon RT Powder

Superplasticizer for concrete in water-soluble bags.



- **Application:**
  - ready-mixed concrete
  - liquefaction of stiff concrete
- **Performance characteristics:**
  - easy handling
- **Base:** polycarboxylate ether
- **Colour:** brown powder
- **Packaging:** 15x1 kg water-soluble bags per box



#### Viscostar Strong P

Stabilizer for concrete to reduce the concrete consistency.



- **Performance characteristics:**
  - prevents settling
  - reduces the consistency
  - structural stabilization of strongly liquefied concrete
- **Base:** methyl cellulose
- **Colour:** white powder
- **Packaging:** 20 kg bags



#### Mapeplast UW

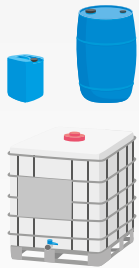
Viscosity modifying admixture for concrete.

Microstructure stabilization of highly liquefied concrete.



- **Performance characteristics:**
  - prevents settling
  - concrete remains stable at a high consistency
  - no reduction in final strength
- **Base:** methyl cellulose
- **Colour:** white powder
- **Packaging:** 4x3 kg water-soluble bags in a box, 14 kg bag

### 9.9 Miscellaneous



#### Construction Dispersion

Polymer quenching for concrete.  
Increases the resistance and flexibility of concrete.



• **Application:**

- for impermeable concrete
- for paving stones

• **Performance characteristics:**

- facilitates compression of rigid concrete
- reduces the efflorescence

• **Base:** acrylic dispersion

• **Density:** 1.01 – 1.05 g/cm<sup>3</sup>

• **Colour:** white

• **Recommended dosage:** 0.7 – 10% of the cement weight

• **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC



#### Mapecrete LI Hardener

Surface treatment for concrete.  
Consolidates the surface of cementitious systems.

• **Performance characteristics:**

- higher surface quality
- lower abrasion
- higher durability
- reduced efflorescence

• **Base:** lithium

• **Density:** 1.0 g/cm<sup>3</sup>

• **Colour:** transparent

• **Consumption:** 0.2 – 0.4 kg/m<sup>2</sup>

• **Packaging:** 25 kg canister



#### Mapeplast SF

Fine-particle silicon dust as an additive for high-quality concrete in the areas of new construction and renovation.



• **Application:**

- for particularly resistant concrete in the areas of new construction and renovation
- underwater applications

• **Performance characteristics:**

- high strength
- low water penetration depth
- reduced efflorescence

• **Base:** amorphous silicon dioxide

• **Bulk Density:** ~0.6 kg/l

• **Bulk Density:** 2.2 g/cm<sup>3</sup>

• **Colour:** dark grey powder

• **Consumption:** 20 – 60 kg/cm<sup>3</sup>

• **Packaging:** 10 kg water-soluble bag, 20 kg bag

### 9.9 Miscellaneous



#### Mapecrete Drain L

Polymer quenching for permeable concrete.

Increases the strength and flexibility of permeable concrete.

- **Performance characteristics:**

- higher strength
- lower modulus of elasticity
- higher frost/de-icing salt resistance

- **Base:** polymer emulsion

- **Density:** 1.00–1.04 g/cm<sup>3</sup>

- **Colour:** white

- **Recommended dosage:** 0.7–4% of the cement weight

- **Packaging:** 25 kg canister



#### Expanjet

Grout for the production of shrinkage-compensated, expanding, free-flowing and pumpable concrete. For the subsequent bonding of individual parts.

- **Colour:** grey powder

- **Packaging:** 20 kg bags



#### Mapeair Zero BV2

Diluted defoamer for the reduction of the air content in fresh concrete.



- **Application:**

- for fibre concrete

- **Performance characteristics:**

- enhanced properties of exposed concrete
- increased volumetric weight
- increased strength

- **Density:** 1.06–1.10 g/cm<sup>3</sup>

- **Colour:** white

- **Recommended dosage:** 0.1–1% of the cement weight

- **Packaging:** 25 kg canisters, 220 kg drum

### 9.9 Miscellaneous



#### MAPEI Defoamer DF 100

Concentrated defoamer for the reduction of the air content in fresh concrete.

- **Application:**
  - for fibre concrete
- **Performance characteristics:**
  - enhanced properties of exposed concrete
  - increased volumetric weight
  - increased strength
- **Density:** 0.94–0.98 g/cm<sup>3</sup>
- **Colour:** transparent
- **Recommended dosage:** 0.1–0.4% of the cement weight
- **Packaging:** 10 kg or 25 kg canisters, 200 kg drum



#### Expacrete Plus

Expansion agent for cementitious systems.

Can significantly reduce the shrinkage of concrete when used in combination with a **MAPECURE SRA** product. This allows for larger planes in industrial floors while reducing cracks at the same time.



- **Colour:** grey powder
- **Recommended dosage:** 3–5% of the cement weight
- **Packaging:** 20 kg bags





# MAPECRETE SYSTEM

The **MAPECRETE SYSTEM** is the combined use of a shrinkage reducing admixture with an expansion agent. It is particularly suitable for joint-free, shrinkage-compensated industrial floors with high aesthetic requirements for structural quality and appearance. The Mapecrete System retards the shrinkage of the concrete. Shrinkage only occurs when the concrete has reached its strength and can thus absorb the tractive forces better. This means that there are significantly fewer or no cracks. This therefore allows much larger planes without joints.

## TECHNICAL CHARACTERISTICS

The **MAPECRETE SYSTEM** retards the shrinkage of the concrete. Shrinkage only occurs when the concrete has reached its strength and can thus absorb the tractive forces better. This means that there are significantly fewer or no cracks. This therefore allows much larger planes without joints.

### Expanded plane sizes

Conventional industrial floors must be cut in planes of 8x8 m to avoid shrinkage cracks. Mapecrete System extends the plane size to 48x48 m.

### Minimize shrinkage, expand concrete

Normal concrete (e.g.: C30/37 B2 GK22) is reduced by approximately 0.5 per thousand – 500 µm/m. in half a year. The addition of a shrinkage reducing admixture can minimize the autogenous shrinkage and thus reduce this value to 250–400 µm/m.

## DOSAGE RECOMMENDATION

- **MAPECURE SRA 20** – shrinkage reducing admixture 1.0–1.4% of cement weight
- **EXPANCRETE PLUS** – expansion agent 3.0–5.0% of cement weight

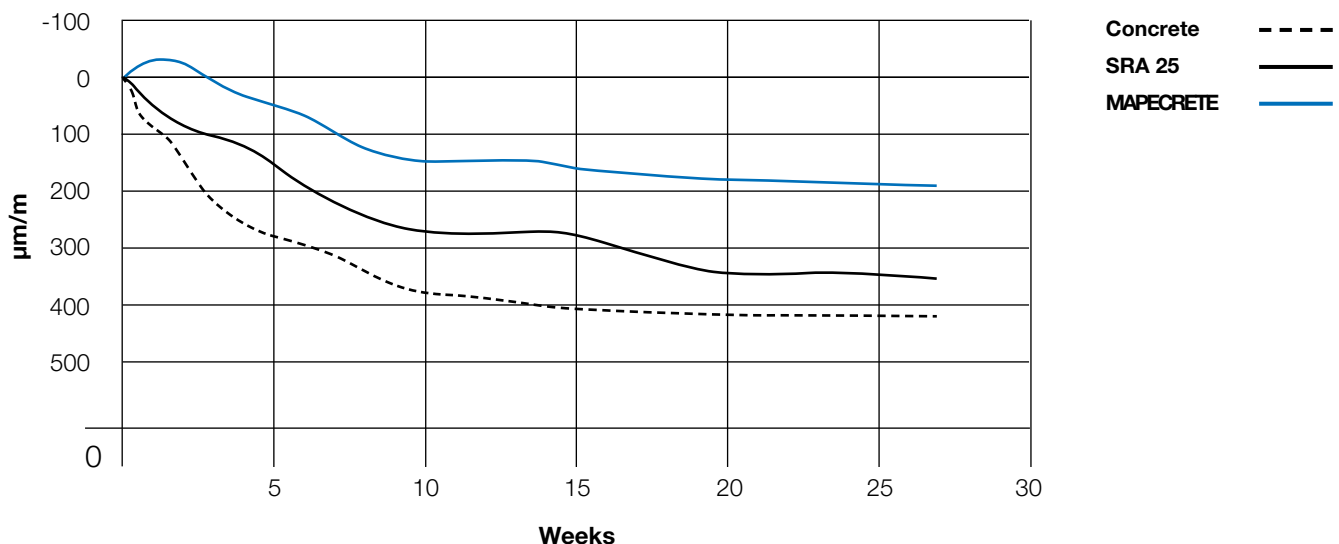
## REFERENCE VALUES FOR CONCRETE MIX FORMULA

320 kg	binder (cement)
160 litres	water
1800 kg	sand and aggregate
3.0 kg	superplasticizer from the <b>DYNAMON SERIES</b>
15 kg	<b>EXPANCRETE PLUS</b>
3.8 kg	<b>MAPECURE SRA 20</b>
30 kg	steel wire fibres



Determine the exact concrete mix formula in preliminary tests depending on the requirements of the building (structural analysis, point loads, surface finish, panel thickness, panel dimensions, ...)

## CONCRETE SHRINKAGE



### AREAS OF APPLICATION

Since 2012, several 100,000 m<sup>3</sup> of concrete have been processed by the **MAPECRETE System** in many European countries and the advantages of compensated shrinkage have proven themselves in the following practical applications:

- **Warehouses and production areas** with high requirements for structural quality and aesthetics in a seamless design
- **Concrete roads, airfields and parking decks** with high requirements for durability, screeds with particularly demanding specifications of flatness (no cupping)
- **Car dealerships and sales areas**, especially with a subsequent coating, as well as for particularly high aesthetic requirements, where a joint would be undesirable
- **Particularly dense concrete**, e.g. in sewage treatment plants or concrete water tanks
- **The seamless design facilitates** installation, sanding of surfaces, spreading of hard material mortar or further coating of the concrete
- **Production of floor slabs for viaducts** where expansion joints are always required, as the structures are exposed to different temperature fluctuations depending on the region
- **Repair work on viaduct piles** where the new concrete must have the same volume as the concrete girder

**Industrial Floors**



**Edge Beam**



**Slabs for viaducts**



Warehouse in Nußdorf, MAPEI headquarters  
Dynamon SF 14, Dynamon LZ 553,  
Expancrete Plus, Mapecure SRA 20





# MAPECOLOR PIGMENT

**MAPECOLOR PIGMENT** for colouring concrete.  
Available in 10 standard colours.

**Mortuary, St. Peter im Sulmtal**  
Mapecolor Pigment Noir



## 10 STANDARD COLOURS

Our dyes are CE Type B certified and guarantee quality, durability and reproducibility.



Yellow



Ochre



Red



Dark Brown



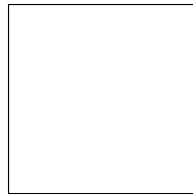
Light Brown



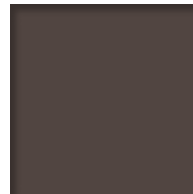
Green



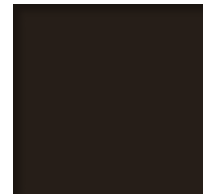
Blue



White



Anthracite



Black

## APPLICATIONS

The pigments have been selected on the basis of their colour intensity and durability, so Mapecolor Pigment meets all requirements for the following applications:

- **ready-mixed concrete**
- **precast concrete**
- **special applications**
- **concrete goods**

## NOTE:

On the customer's side, larger sample areas must be cast with all the concrete constituents and the result assessed in order to obtain the exact colouring. This also serves to evaluate the influence of the colour of the concrete, the distribution of pigments in the concrete mixer, differences in individual concrete batches and so on.

### Storage Capacity:

Pigments can be stored for 12 months when dry (do not store outdoors).

## PACKAGE SIZES



- **Paper bag**  
20 to 25 kg, according to density
- **Water-soluble container**  
5 kg, packed in cardboard and water-soluble bags



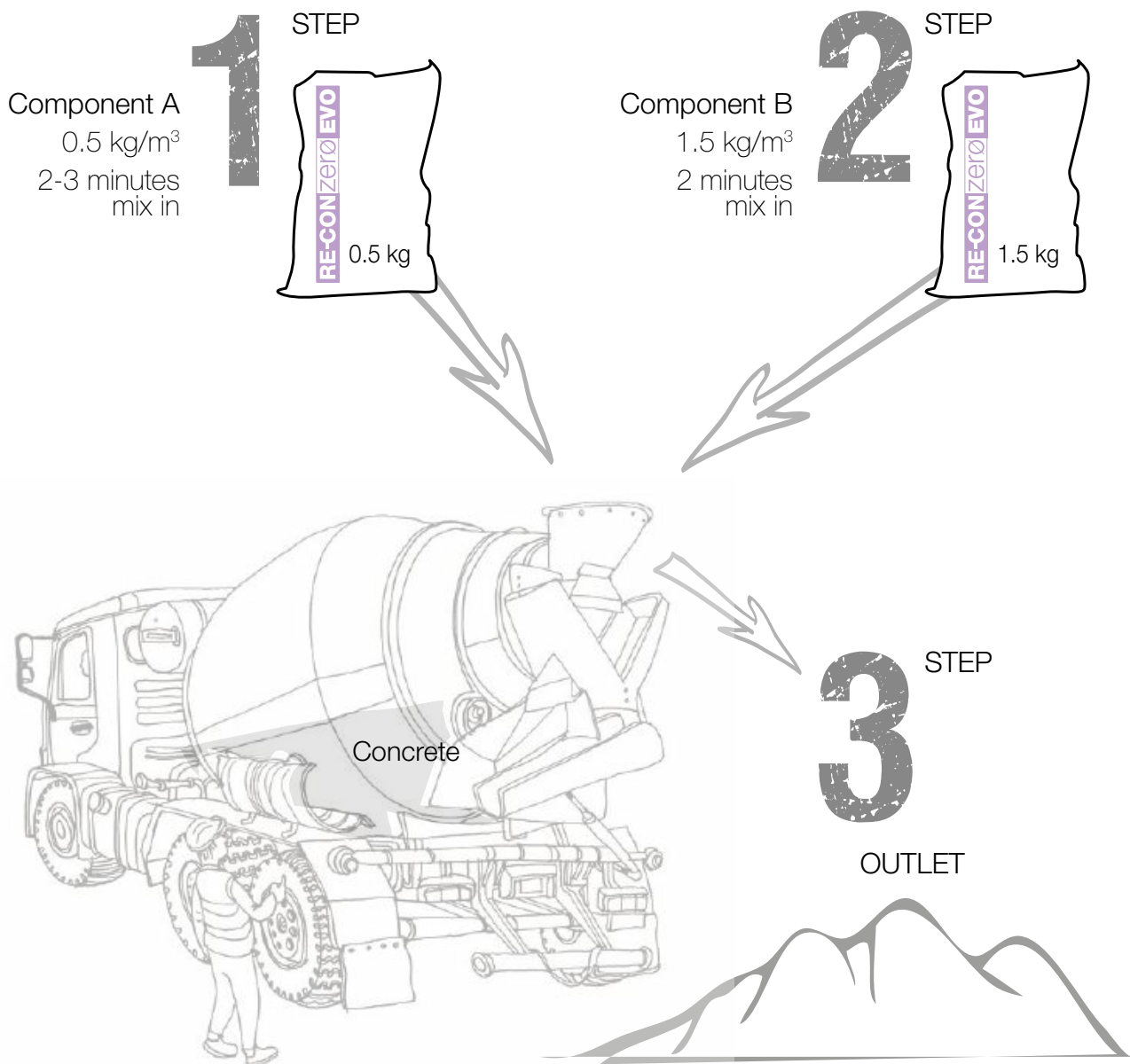
The water-soluble bag allows for faster mixing, which allows improved homogeneity of the colours to be produced. The Polyane packaging guarantees efficient protection against moisture. The cardboard enables space-saving storage.

**Everything is recyclable, out of consideration for the environment.**



# RE-CON **zerø** EVO

Returned Concrete with Zero Impact  
Residual concrete without negative effects on the environment



KIT for the preparation of 1 m<sup>3</sup> residual concrete:

**RE-CON zerø EVO** Component A – 1 water-soluble bag of 0.5 kg

**RE-CON zerø EVO** Component B – 1 water-soluble bag of 1.5 kg



### RESIDUAL CONCRETE

Around 10 billion m<sup>3</sup> of concrete are produced worldwide every year. Of these, approximately 50 million m<sup>3</sup> are not used and returned to the production site. 10% of these are classified as “critical”, which means they cannot be returned to a fresh state to be re-used, so 5 million m<sup>3</sup> of residual concrete have to be processed every year. Residual concrete is a major burden on any company, in terms of its impact on the environment, costs and management.

**The current treatment methods for residual concrete do not offer a sustainable solution, because:**

- they are an environmental burden
- potentially recyclable materials are not enhanced by them
- they lead to an increased cost burden

### RE-CON ZERO EVO

#### INNOVATIVE PRODUCT FOR THE SUSTAINABLE TREATMENT OF RESIDUAL CONCRETE

**RE-CON ZERO EVO** reuses the residual concrete by converting it into a granulated material that can be recycled as concrete aggregate.

#### ADVANTAGES OF RE-CON ZERO EVO

- concrete can be completely reused at high quality
- there is no waste
- it is added directly into the truck mixer and no additional equipment is required for the preparation
- precious raw materials (cement, sand, gravel, etc.) are bound and fed back into production (cycle)
- resources are spared and thus also material requirements (aggregates) are reduced
- easy to use and safe application without dangerous, toxic or carcinogenic substances





### A VALUABLE CONTRIBUTION TO SUSTAINABILITY

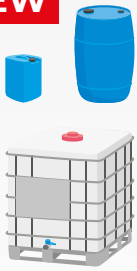
Recycling concrete saves primary raw materials. Both fresh and hardened concrete recycling is possible in the concrete plants.

While washout systems can recover aggregates from fresh concrete, large amounts of residual water are also produced, which can be problematic for further use in concrete production (the amount involved does not match the amount used, consistency of the fresh concrete, higher demand for additives, ...). In addition, the machine technology in washout-recycling plants is soon overburdened with larger quantities of concrete. Here, the tried and tested method with **RE-CON ZERO EVO** offers a remedy. Fresh concrete is converted into a free-flowing recycled aggregate without generating further by-products or waste.

In the recycling process for solid concrete, in contrast to the recycling of fresh concrete, cured concrete is reused from demolition work. Concrete rubble is broken down, sorted out and then processed. The individual grain fractions can be used as a substitute for natural aggregates in the production of fresh concrete. The absorption capacity of broken surfaces, the addition of non-concrete materials and the variation in grain structures require special consideration during the production of concrete. With **RE-CON AGG**, MAPEI's concrete additive product line, concrete production using recycled aggregates is achieved under these general conditions. Due to the robustness of the **RE-CON AGG** product line, recycled concrete can be produced in a targeted manner.



**NEW**



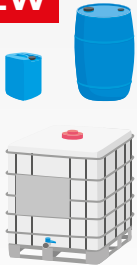
### Re-Con AGG 200 AT

Superplasticizer based on polycarboxylate ether for concrete with difficult raw materials.



- **Performance characteristics:**
  - superplasticizer for concrete production in adsorbing sands or recycled aggregates
- **Base:** modified polycarboxylate ether
- **Density:** 1.06 – 1.10 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

**NEW**



### Re-Con AGG 100 DE

Slump retention superplasticizer based on polycarboxylate ether for concrete with difficult raw materials.

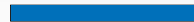


- **Performance characteristics:**
  - to maintain the consistency of fresh concrete in the case of adsorbing sand or recycled stone grains
  - for use in combination with a superplasticizer
- **Base:** modified polycarboxylate ether
- **Density:** 1.05 – 1.09 g/cm<sup>3</sup>
- **Colour:** brown
- **Packaging:** 25 kg canisters, 220 kg barrels, 1000 kg IBC, loose

Liquefaction / Water reduction



Slump retention / Processability of concrete



Early strength





# TERMS AND CONDITIONS

valid from 1.3.2019

These terms and conditions are intended for legal transactions between entrepreneurs. In the case of a consumer transaction as defined in §1 of the Austrian Consumer Protection Act (KSchG), those articles of the contract as containing special provisions for consumers shall apply (Art. 9.2).

## 1 GENERAL, CONCLUSION OF CONTRACT

- 1.1 For all deliveries and services of MAPEI, the following terms and conditions apply exclusively. Deviations from these and other supplementary agreements with the customer are only effective if confirmed in writing by MAPEI. Upon placing an order with MAPEI, at the latest upon acceptance of the delivery/service, these terms and conditions shall be deemed as having been accepted by the customer.
- 1.2 Any terms and conditions of the customer shall not be accepted unless otherwise expressly agreed in writing. There is no need for any special objection by MAPEI against the customer's terms and conditions.
- 1.3 Declarations addressed to MAPEI must be made in writing (including fax) in order to be legally binding. Verbal orders and agreements as well as verbal side agreements and assurances become effective and legally binding only upon written confirmation by MAPEI. Statements by employees shall only be binding upon MAPEI if confirmed in writing by authorized representatives of MAPEI.
- 1.4 Should individual provisions of these terms and conditions become void, this shall not affect the validity of the remaining provisions and of the contracts concluded thereunder. In such a case, the void provision shall be replaced by an effective one that comes closest to its intent and purpose.
- 1.5 As far as reference is made to the price list in these terms and conditions, this shall mean the MAPEI price list valid on the day of delivery or performance.

## 2 PRICES, TERMS OF PAYMENT, RETENTION OF TITLE

- 2.1 Our prices are net prices in Euro, ex works, plus the legally prescribed VAT. In the absence of price information in individual cases, prices shall be set according to the valid price list (1.5). The dispatch/transport from the delivery warehouse shall take place at the customer's expense.
- 2.2 The purchase price is due for payment immediately upon delivery/performance and without deduction, unless special terms of payment are agreed in writing in individual cases. Notwithstanding an agreed payment date, MAPEI shall have the right to make all outstanding deliveries only against immediate cash payment if the customer is in default of payment or if MAPEI becomes aware of circumstances resulting in a significant deterioration of the customer's financial situation after conclusion of the contract.
- 2.3 In case of objective default of payment by the customer, interest on arrears shall be payable at 10% p.a., or at a higher statutory rate of default interest. Furthermore, the customer is obliged to reimburse MAPEI for the resulting dunning and collection expenses, as far as they are necessary for the appropriate legal action. In any case, this includes a flat-rate processing fee of €40.00 as set out in § 1333 of the Austrian Civil Code (ABGB) and § 459 of the Austrian Commercial Code (UGB) as well as the costs of a written reminder from a lawyer charged with collection according to the autonomous fee criteria of the Austrian Bar Association (AHK 2005) or comparable fee regulations. MAPEI reserves the right to assert further rights and claims. If payment has been agreed in instalments, MAPEI reserves the right to demand immediate payment of all outstanding debts in case of late payment of partial amounts or incidental claims (immediate maturity).
- 2.4 The customer may only offset against claims by MAPEI in the event that the customer's counter-claim is recognized in writing by MAPEI or established by court.
- 2.5 Goods delivered by MAPEI remain the property of MAPEI until the purchase price including all incidental costs has been paid in full. The customer must inform MAPEI immediately in writing of all third-party access to the goods as well as of any damage or change of ownership. As long as the retention of title exists, a sale, pledging or other transfer of the goods is only permissible if this has been made known to MAPEI in writing beforehand with the announcement of the name/company and the business address of the buyer/authorized person and MAPEI has agreed to it. In the event of a resale, the purchase price claim is deemed to have been assigned to MAPEI for the purpose of payment with immediate effect and MAPEI is entitled at any time to inform the third party debtor of this assignment. At the same time, the customer is obliged in such a case to make a corresponding entry in his accounts or on his invoices. Following the transfer, the customer shall remain entitled to collect the assigned claim; MAPEI reserves the right, however, to collect the claim itself if the customer does not properly fulfil his payment obligations. In the event of a delay in payment by the customer, MAPEI is

entitled to gain access to and remove the reserved goods from the custody of the customer.

## 3 DELIVERY / PERFORMANCE

- 3.1 Specified delivery or performance periods shall, unless expressly agreed as binding, only be considered approximate and non-binding. Partial deliveries are permitted.
- 3.2 In the event that the delivery/performance of MAPEI is delayed for reasons beyond MAPEI's control and for events of force majeure and other unforeseeable events which cannot be reasonably anticipated, such as strikes, operational or traffic disruptions and sovereign acts, the delivery obligations under the terms of this contract shall be suspended for the duration of the disruption and to the extent of the consequences of such disruption and the delivery deadlines shall be extended accordingly. If such delays continue for more than two months, both the customer and MAPEI are entitled to withdraw from the contract.
- 3.3 If MAPEI is in default in the case of a binding deadline, the customer can only withdraw from the contract after he has set MAPEI a grace period of at least 14 days in writing and this has passed fruitlessly. Claims for damages by the customer due to non-performance or delay, also in the form of contractual penalties, are excluded, except in the case of proof of intent or gross negligence of MAPEI.
- 3.4 For all services and mutual obligations arising from this contract, the place of performance shall be the registered head office of MAPEI. In the case of dispatch/transport, the risk shall pass to the customer as soon as MAPEI has handed over the goods to the carrier chosen by him or – in the case of transport by MAPEI – has loaded the transport vehicle.
- 3.5 If MAPEI accepts the return of delivered goods as a gesture of goodwill, a manipulation fee of 20% of the value of the goods will be charged.
- 3.6 If delivery is carried out in rental containers, these must be returned at the customer's expense in undamaged, cleaned and reusable condition at the latest after 30 days.
- 3.7 In the case of deliveries to the construction site of the customer, the latter shall ensure that access routes are suitable and approved for use with trucks and trailers to the extent of the ordered quantity (up to 40 tons). The customer is liable for expenses and damages due to obstacles during access.

## 4 WARRANTY

- 4.1 The customer must notify an authorized MAPEI representative of any hidden defects immediately, or else at the latest within five days of receipt of the delivery/service. Such notification must be in writing and contain a description of the defect; otherwise, the goods shall be deemed to be approved and warranty claims or claims for payment of damages as well as avoidance on the grounds of error shall be excluded.
- 4.2 The warranty period is 6 months from the date of delivery/performance. The right of recourse against MAPEI in accordance with § 933b paragraph 1 of the German Civil Code expires 6 months after delivery/performance; after that, there is no longer any liability due to a claim of recourse by the customer.
- 4.3 In the case of a defective delivery/service, MAPEI shall be free to choose the method of compensation, either through improvement, replacement or credit up to the value of the goods or the order claimed for. Complaints do not entitle the customer to withhold the entire invoice amount. At most, half the invoice amount of the delivery/service affected by the defect can be withheld by the customer only until receipt of the replacement delivery. The customer must provide MAPEI with a sample of the disputed delivery.
- 4.4 In the event of unjustified notification of defects, the customer shall reimburse all costs associated with the examination of the claimed defects.
- 4.5 Drawings, illustrations, colours, dimensions and weights in catalogues, brochures, leaflets, etc., as well as design or material samples, are to be understood as reference values and therefore only approximate, unless expressly designated as binding. Deviations due to production must be accepted by the customer, provided that the underlying sample has been approved or the deviations are not significant.

## 5 LIABILITY

- 5.1 Claims for compensation in cases of slight negligence are hereby excluded, and MAPEI shall not be liable for material damage or financial loss, regardless of whether from direct or indirect damage, loss of profit, damages caused by defects or consequential damage. This exclusion of liability also applies to the employees, legal representatives and agents of MAPEI; it also applies to technical or other consulting services in any form.

- 5.2 In cases of gross negligence, MAPEI shall only be liable for material damage and financial loss to the extent that cover exists from its existing business and product liability insurance, limited in terms of value up to the amount of the insured sum paid out; the amount of this is shown in the current price list (1.5). The injured party must prove the existence of gross negligence on the part of MAPEI. Liability for purely financial losses is excluded, except in the case of proof of intent of the infringing party. In the event that the customer has an insurance claim for benefits for the resulting damage, this amount shall be fully credited against the claim for damages.
- 5.3 The customer must observe the relevant operating instructions and processing guidelines of MAPEI for the use and processing of products and generally accepted rules of structural engineering. In the event of a breach of these by the customer, the causal link between this infringement and any damages incurred is presumed, as well as the absence of any defects in the delivery/service at the handover by MAPEI.
- 5.4 The exclusion of liability does not apply in the case of personal injury or in the case of a liability for compensation according to the Austrian Product Liability Act (PHG). Any recourse claims from customers or third parties against MAPEI falling under "product liability" within the meaning of the PHG are excluded, unless the party entitled to recourse proves that the defect was caused by MAPEI and at least caused by gross negligence.
- 5.5 Claims for damages must be legally asserted within 12 months from the time at which the damage occurs, otherwise the claim will expire.

## 6 PRODUCT AND APPLICATION INSTRUCTIONS

- 6.1 The application of the delivered products must be carried out in accordance with written instructions for use and/or application guidelines prepared by MAPEI and generally accepted rules of structural engineering, as well as regional statutory provisions or sector-specific standards (e.g. industrial guidelines). The customer must relate these instructions for use and/or application guidelines to the specific purpose of the product and the local conditions. It is the customer's responsibility to obtain or become aware of any existing instructions for use or application guidelines.
- 6.2 Stated requirements are only indicative values that are not binding. Information about storage capacity always refers to original sealed products and proper, dry storage.
- 6.3 The preliminary tests prescribed for products shall be carried out under realistic conditions. This also applies before a standard application of products.
- 6.4 Any specific product or application recommendations, needs assessments or other calculations that MAPEI makes available to the customer are non-binding, remain the property of MAPEI and may not be reproduced or made available to third parties or used in a manner other than for the agreed purpose. MAPEI may recover these documents at any time. In accordance with clause 5 of this contract, MAPEI is only liable for these product or application recommendations or such if these recommendations are made by an authorised person in writing, are expressly binding and are related to a particular construction project, so long as the customer can prove that MAPEI has been provided with all relevant details in advance. They do not constitute an independent guarantee of material properties, especially since MAPEI has no influence on the conditions of the construction site and the quality of the execution of the work.

## 7 PRIVACY

The customer agrees revocably at any time to let MAPEI automatically determine, store, process and otherwise use the personal data provided by the customer (name, address, e-mail, account details, etc.) for the purposes of fulfilling the contract and providing customer support, and to let MAPEI send electronic mail for advertising purposes. Unless legally required, MAPEI will not transmit this data to others without the consent of the customer.

## 8 PLACE OF JURISDICTION, APPLICABLE LAW

- 8.1 Place of jurisdiction for all legal disputes in connection with this contractual relationship shall be the competent court in St. Pölten.
- 8.2 The contract and all claims derived from it are subject to Austrian material law to the exclusion of the United Nations Convention on Contracts for the International Sale of Goods.

## 9 ADDITIONAL PROVISIONS FOR CONSUMERS WITHIN THE MEANING OF THE AUSTRIAN CONSUMER PROTECTION ACT (KSChG)

- 9.1 Right of withdrawal for consumers according to §§ 5a et seq. KSChG:
- 9.2 If the customer is a consumer within the meaning of the KSChG and if the contract has been concluded only by means of remote communication such

as telephone, letter, fax or e-mail, the customer can withdraw from the submitted contract or declaration of contract without giving reasons within 7 working days (timely sending of the declaration is sufficient), whereby Saturday does not count as a working day. The time period begins with the day of receipt of the goods at the customer. In the event of withdrawal, MAPEI will reimburse the payments made by the customer and compensate any necessary business expenditures of the customer regarding the purchased goods. In the event of withdrawal, the customer must immediately return the purchased goods at the customer's own expense and pay MAPEI an appropriate fee for the use, including compensation for the related depreciation of the goods.

- 9.3 Clause 1.3 applies with the proviso that the legal validity of informal declarations by MAPEI or its representatives to the detriment of the consumer is not excluded (§ 10 KSChG). Immediate maturity in accordance with clause 2.3 and the restriction on offsetting according to clause 2.4 shall only apply to contracts with consumers as per the KSChG in accordance with the regulations defined therein. Clauses 4.1 to 4.3, clause 5.2, clause 5.5, clause 8.1 do not apply to contracts with consumers.

## 10 SPECIAL ADDITIONAL CONDITIONS FOR TEST SERVICES

- 10.1 The service charge is made according to the respective valid tariff as set out in the price list (1.5) or according to the specific offer, whereby extensive test reports and explanations as well as evaluations can be additionally charged according to the respective time required.
- 10.2 The respective test material shall be provided by the customer at the customer's expense at the company headquarters of MAPEI and – subject to a written agreement to the contrary – shall become the property of MAPEI with the actual takeover. The customer alone assumes liability for any transport damage or other damage to the test goods.
- 10.3 The customer must obtain all necessary permits and authorizations for the performance of the test work in good time at his own responsibility and at his own expense and also take any necessary protective measures. If the customer does not fulfil these obligations, the customer shall bear any resulting damages and disadvantages to MAPEI. The customer also undertakes to indemnify and hold MAPEI harmless in this respect.
- 10.4 The customer must also provide the documents and information required for the performance of the contract free of charge, in particular all information on a particular characteristic of the test material.
- 10.5 The customer shall bear the adverse consequences of incorrect or inaccurate information at the time of placing the order.
- 10.6 The test reports prepared by MAPEI and the test services provided are intended only for the use of the respective customer and may not be passed on to third parties.
- 10.7 Irrespective of whether the work produced by MAPEI (e.g. test report, test service or other documentation and documents) is protected by copyright or not, MAPEI shall grant the customer a permit to use the work only in accordance with the offer filed, with the right to use the work only for the purpose stipulated in the contract and only under the condition of complete fulfilment of the contract. Any use beyond this shall be subject to separate fees. In any case, the customer may neither pass on or publish results from the contractual services to third parties without the written consent of MAPEI; this also applies to the passing on to associated or dependent companies.
- 10.8 The respective test reports are drawn up in duplicate and do not replace an authorization or certificate required by an accreditation body.
- 10.9 The customer declares his agreement, revocable at any time, that the findings of MAPEI gained within the scope of the test services can be used for the promotion of research without further remuneration and that the test results can be published in an anonymous form. A revocation applies only to future uses.

The English version of these terms and conditions is a translation from the German original for information purposes only. In case of a discrepancy the German original shall prevail.



# EVERYTHING'S OK WITH MAPEI

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