

CONCRETE FLOORING

Mapei solutions
for industrial floors





**A UNIQUE RANGE OF PRODUCTS AND SERVICES
DEDICATED TO SECTOR LEADING COMPANIES,
WHICH ASSERT MAPEI PRESENCE IN THE CONCRETE
INDUSTRIAL FLOORS SEGMENT.**

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Concrete Flooring System

The market segment

In recent years, the **concrete flooring** market segment changed a lot by using many innovative concepts. New technologies, an increased specialisation and expertise of paving contractors have enhanced the quality of the structures. Clients, flooring designers, trade associations and standards makers have become aware of its importance. **Industrial concrete flooring** is no longer considered a work of minor relevance but is finally considered such as the other structural works. In fact, by law, a **structural design** and **technical specifications** are today required.

The production of industrial floors

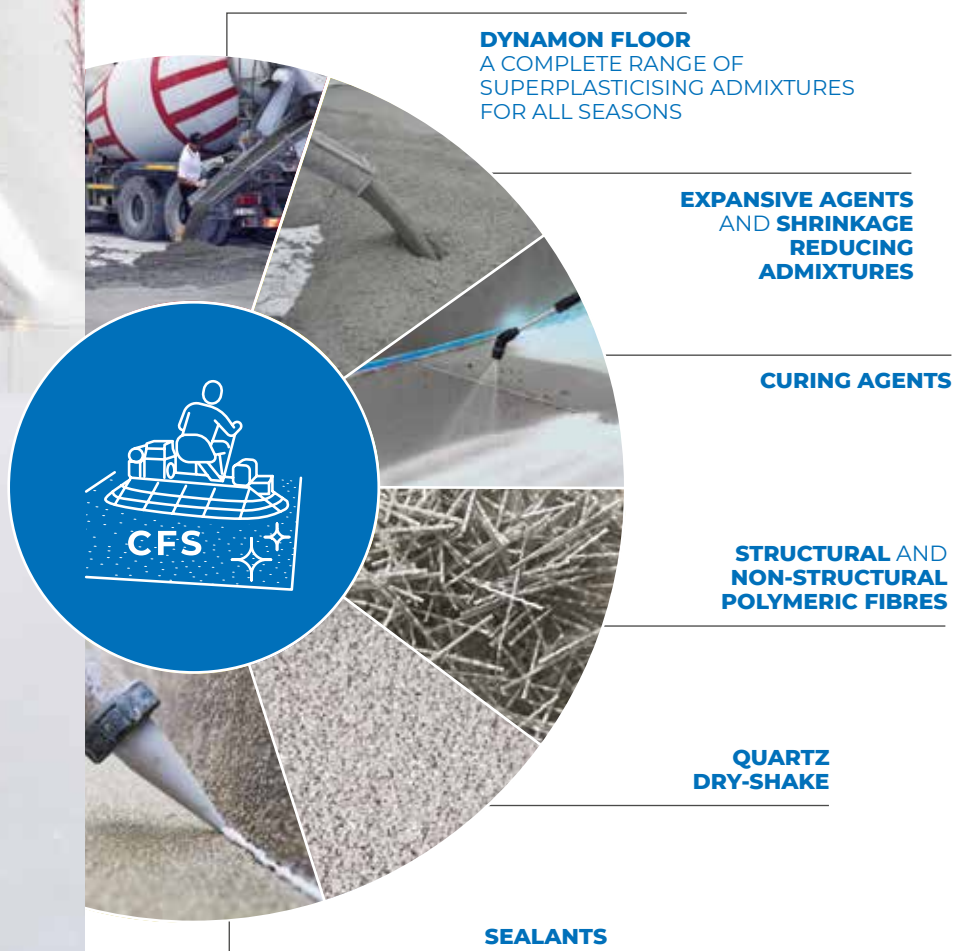
The concrete floor is the **functional support for running** industrial and commercial **activities**. Only a **proper design** and **qualified realisation** allow to obtain a **resistant and durable** result. The good practice guidelines highlight some important factors. The use of **durable concrete** is a primary condition but not sufficient to guarantee a successful work; it is also necessary to implement the design, technological and operational aspects.

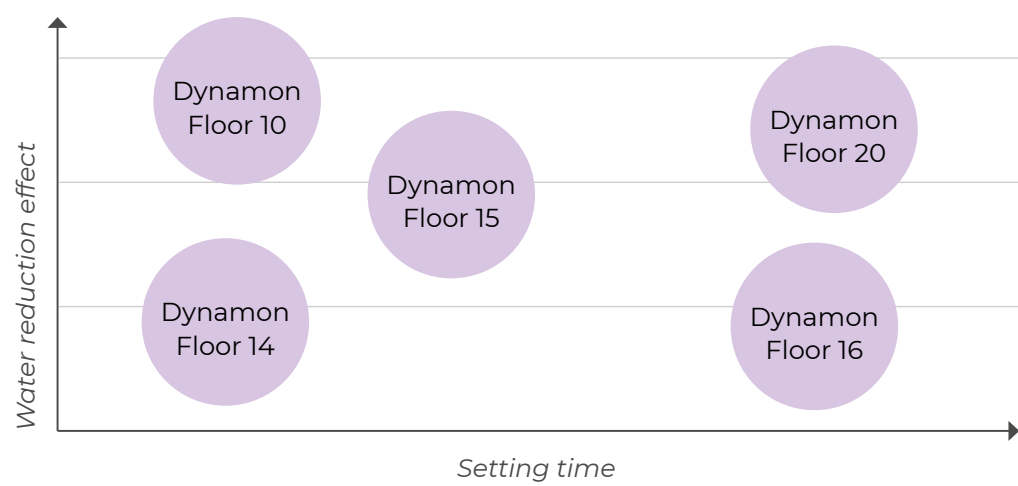


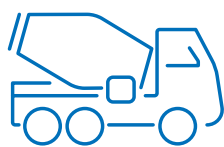


Mapei approach

The new approach of **Mapei** is to assert its presence in the industrial concrete floor market sector through dedicated products and services for companies leading this segment.







Casting of concrete

Dynamon Floor

The **Dynamon Floor superplasticising admixtures** are specifically designed to obtain concrete for flooring, with **low water/cement ratio**, **high workability**, without segregation side effect and **high reduction in finishing times**. Their special formulation increases the service life of the floor.

The product range

The **Dynamon Floor** range includes several **admixtures** to be used depending on the weather conditions and technical specifications required by the design.

- **Dynamon Floor 10**

Superplasticiser based on polycarboxilate for concrete floors.

- **Dynamon Floor 14**

Superplasticiser based on polycarboxilate, with wide range of dosage, for wintergrade concrete.

- **Dynamon Floor 15**

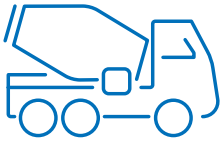
Superplasticiser based on polycarboxilate with accelerating effect for concrete floors.

- **Dynamon Floor 16**

Superplasticiser based on polycarboxilate for summergrade concrete.

- **Dynamon Floor 20**

Superplasticiser with high water reduction effect for summergrade concrete.



Casting of concrete

Mapefibre

Mapei is the first Italian producer of **polymeric fibres for concrete**. The **Mapefibre** range includes several products based on polypropylene or steel to be used as **microfibres** or **structural macrofibres**.

Microfibers for the reduction of the plastic shrinkage cracking.



- **Mapefibre NS 12**
Mono-filament, virgin polypropylene fibres with a length of 12 mm for concrete.
- **Mapefibre NS 18**
Mono-filament, virgin polypropylene fibres with a length of 18 mm for concrete.

Macrofibers for the total or partial replacement of steel wiremesh to increase the toughness property of the pavement.



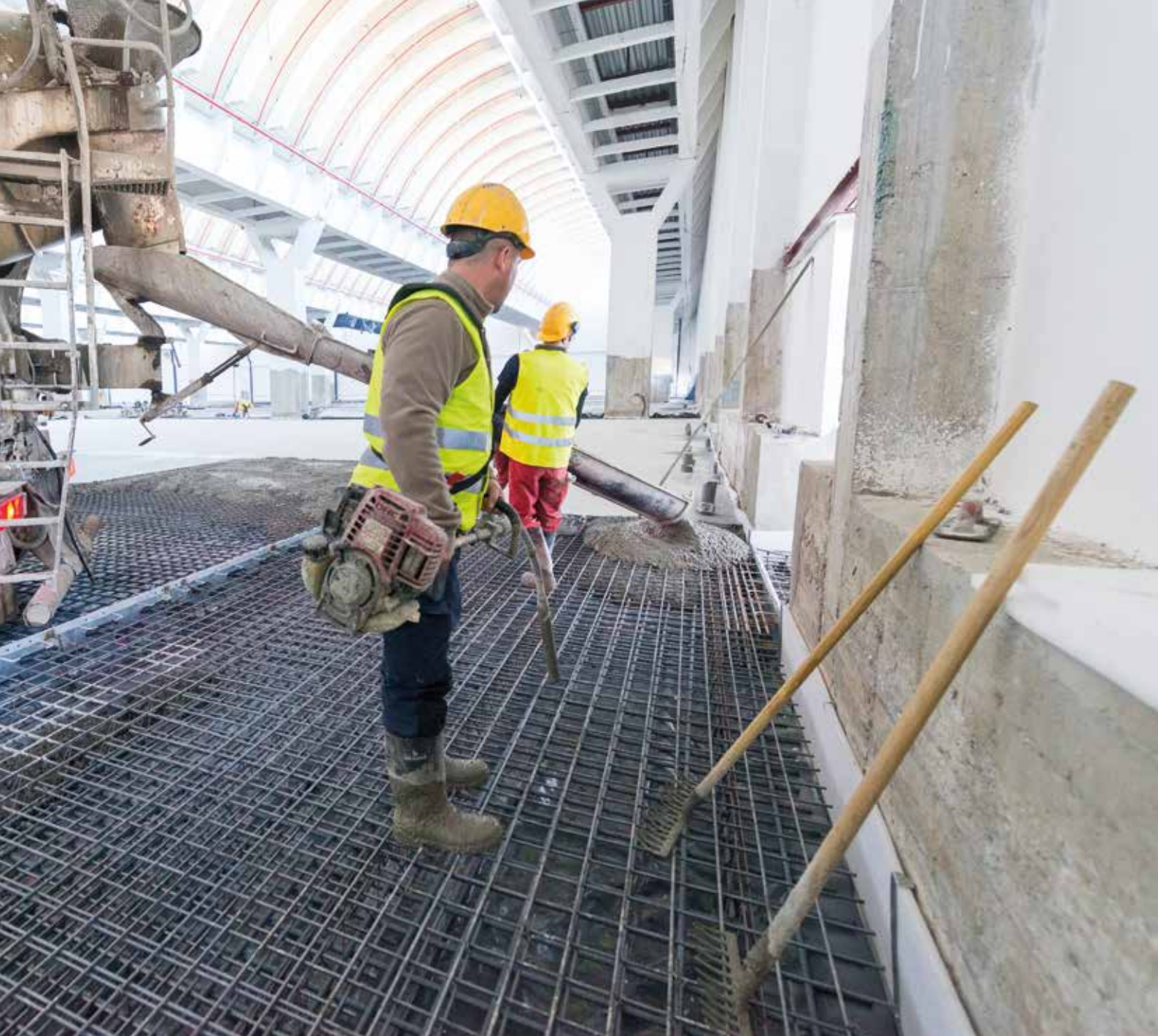
- **Mapefibre ST 50 Twisted**
Structural polymeric fibres of class II, complying with EN 14889-2:2006, developed to improve the performance of conventional and precast concrete and shotcrete.



- **Mapefibre ST 42**
Structural polymeric fibres for concrete and cementitious screeds. They can replace partially or totally the steel reinforcement in concrete floors.



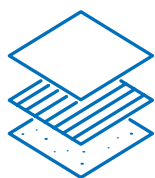
- **Mapefibre Steel**
Steel structural fibres for concrete.





Technical and economical advantages

- Strong reduction of concrete shrinkage.
- Cracking resistance.
- Reduction of curling effect.
- Contraction joint elimination.
- Reduction of the maintenance cost and improvement of planarity.



Jointless floors

Mapecrete System

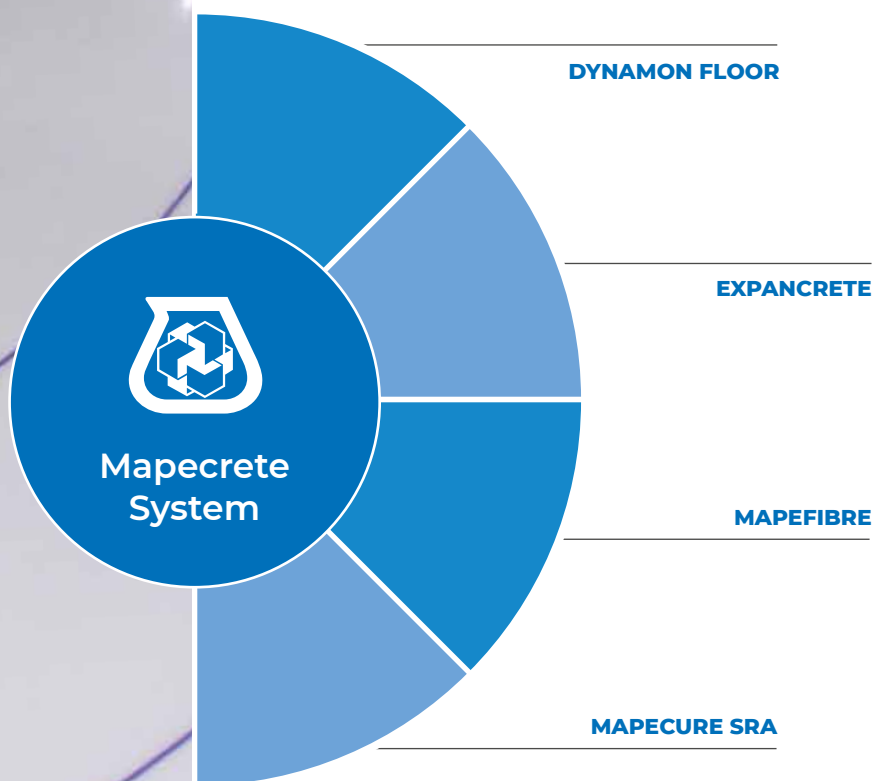
Mapecrete System is based on a shrinkage compensated concrete technology. The concrete contraction is compensated by a restrained expansion through a structural reinforcement. **Mapecrete System** is a **modular system**, consisting of four different products which work in synergy in order to obtain a jointless floor.

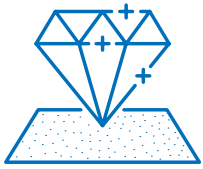
- **Expancrete**

Expansive agent in the hardening phase for shrinkage compensated concrete.

- **Mapecure SRA**

Liquid admixture for **reducing drying shrinkage**.





Concrete flooring finishing

Mapecrete Film

Mapecrete Film is an **evaporation retardant** and **finishing aid** to be used immediately after the trowelling.

Mapetop range

The **Mapetop** range consists of **surface hardeners** to increase the abrasion resistance of the top layer of concrete floors.

They are available in the following colours: grey, anthracite, green, brown, red.

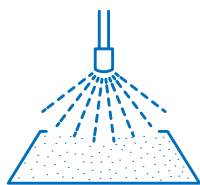
- **Mapetop S AR3**

Pre-blended dry-shake **hardener** for concrete floors made of special aggregates based on corundum, Portland cement and special additives.

- **Mapetop N AR6**

Pre-blended, ready-to-use, dry-shake **hardener** for concrete floors made of special well-graded quartz, Portland cement and special admixtures.





Concrete flooring curing

• Mapecure WG

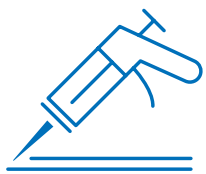
Mapecure WG is a **film-forming curing agent in water emulsion** for concrete. It does not need to be removed from the surface before bonding the floor covering.



Technical and economical advantages

- Optimisation of the mechanical strength development.
- Replacement of TNT (non-woven fabric sheets).
- Increased durability and service life of the floor.
- Helps to prevent plastic shrinkage and the risk of cracks.





Sealing joints

Maeflex range

The **Maeflex** range is specifically formulated for **sealing expansion and contraction joints**, even exposed to **chemical aggressive attack** such as hydrocarbons.



- **Maeflex PU 45 FT**

Rapid-hardening paintable **polyurethane** sealant and adhesive with a high modulus of elasticity for movements up to 20%.



- **Maeflex PU 40**

Paintable **polyurethane** sealant with a low modulus of elasticity for movements up to 25%.



- **Maefoam**

Closed-cell, extruded **polyethylene foam cord** used as a support for elastomer sealants to gauge the correct size of flexible joints. Supplied in rolls in various lengths according to the diameter of the foam.



- **Primer M**

One-component solvent-free **primer** for polyurethane sealants, for use on absorbent and non-absorbent surfaces.



Technical and economical advantages

- Bonding of the joint base.
- Sealing stability.
- Control of the deformation.
- Hydrocarbons resistance.
- High resistance to abrasion and heavy traffic.
- Increase of the floor durability.



Technical and economical advantages

- Chemical and abrasion resistance.
- No-dust and anti-stain effect.
- Efflorescence resistance.
- Protection from oily compounds and other liquids.
- Increase in the durability and service conditions.
- Resistance to ASR (alkali silica reaction).





Final coating

Mapecrete range

The **Mapecrete** range strongly reduces the absorption of oily compounds and other liquids in order to get an **anti-stain effect** on the concrete surface, masonry and stone materials.

- **Mapecrete Creme Protection**

Solvent-free, **silane-based**, thixotropic **water repellent** in water dispersion, ideal for hydrophobic treatments on concrete.

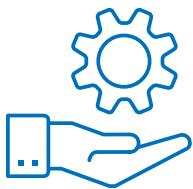
- **Mapecrete Stain Protection**

Hydro-oil **repellent** and **anti-stain** treatment for concrete, natural stone and cementitious surfaces made of modified organic polymers in water solution.

- **Mapecrete LI Hardener**

Surface treatment in liquid form made from lithium silicate with a **consolidating effect**, for new or old concrete floors and concrete surfaces broadcast with quartz sand.





Technical support

Mapei offers its partners many **technical services**, from the design stage to realisation of the project.

Design stage

- **Software for assessing** against drying shrinkage cracks and curling effect.
- **Joints space calculation.**
- **Spreadsheet** for designing fibre-reinforced concrete or combined solution with steel wiremesh.

Offer stage

- **Technical specification** study.
- **Cost** analysis and solutions.
- Assessment **of the potential** solutions.

Realisation stage

- **Mapei technical staff** will assist during the execution of the floor **to control the concrete properties** required by the design.

Mapei world

- Training courses on product technology.
- Seminar/webinar attendance.
- Detailed technical documentation.
- *Realtà Mapei* magazine.





EVERYTHING'S OK WITH MAPEI

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