

Mapeplast R15

Plasticizing admixture for concrete with retarding effect

DESCRIPTION

Mapeplast R15 is a liquid plasticizing admixture with retarding effect for concrete.

WHERE TO USE

Mapeplast R15 is recommended for concrete with medium compressive strength (R_{ck} 20-40 MPa), with a long workability retention.

Mapeplast R15 is especially recommended for applications which require a retarded rate of cement hydration at early ages.

The main applications of **Mapeplast R15** are as follows:

- ready-mixed concrete (especially in hot weather);
- pumped concrete;
- mass concrete.

Some application examples

In addition to its plasticizing effect, **Mapeplast R15** has a slight retarding action on the hydration of cement and is therefore especially recommended for:

- ready-mixed quality concrete (for classes of compressive strength C20/25 and higher);
- ready-mixed concrete for water resistant structures (with a w/c ratio not higher than 0.55): purification plants, tanks, drains, tunnels, etc.;

- mass pouring when a reduction of thermal peaks due to heat of hydration is needed: dams, pillars, foundation slabs, etc.

TECHNICAL CHARACTERISTICS

Mapeplast R15 is a water solution of active polymers which disperse cement granules.

Mapeplast R15 special action can be adjusted to achieve the results required (increased strength, improved workability, reduced cement dosage) by varying the dosage between 0.2% and 1.0% by volume on cement: the greater the dosage, the greater the effect. Retention of workability and set-retardation increase as the admixture dosage is increased.

RECOMMENDATIONS

Although there are no applications where **Mapeplast R15** should not be used there are some particular applications where advantageous alternatives may be used:

- winter concreting (decrease the dosage of 0.1-0.2% respect to the one used in summer time);
- precast concrete: due to the retardation of early strength the use of **Dynamon NRG** or **Dynamon SP** range is recommended to this purpose.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	liquid
Colour:	brown
Density according to ISO 758 (g/cm ³):	1.16 ± 0.03 at +20°C
pH:	8.0 ± 2.0
Main action:	water reduction and/or improved workability
Collateral action:	retarding of initial hydration rate and retention of workability
Classification according to EN 934-2:	set retarding / water reducing / plasticizing admixture. Table 10
Classification according to ASTM C494:	type D
Chlorides soluble in water according to EN 480-10 (%):	< 0.1 (absent according to EN 934-2)
Alkali content (Na ₂ O equivalent) according to EN 480-12 (%):	< 6

APPLICATION PROCEDURE

It is preferable to add **Mapeplast R15** into the mixer after all the other ingredients (water, cement, aggregates). The action of the admixture is more effective when added later. **Mapeplast R15** is most effective when cement and aggregate particles are already wet, and least effective when the admixture is mixed with dry solids, especially if porous, which partially adsorb it.

The use of an automatic dispenser to add the admixture to the concrete is recommended when at least 50% of the design water has been introduced.

COMPATIBILITY WITH OTHER PRODUCTS

Mapeplast R15 is compatible with other products for producing special concrete, and especially with:

- air-entraining agents of **Mapeair AE** range to produce concretes able to resist to freeze/thaw cycles;

- chlorides-free hardening accelerator admixtures from the **Mapectard** range for reaching high mechanical strength at early ages, even in cold weather;
- **Mapectard** range to produce concretes with very long retention of workability and controlled setting time;
- **Mapeform Eco** and **DMA Form-Release Agents** for releasing concrete formwork;
- curing agents from the **Mapecure** range for protection against rapid evaporation of the bleeding water in concrete structures without formwork.

DOSAGE

Dosage by weight:

from 0.2 to 1.2 l per 100 kg of cement.

Dosage by volume:

from 0.15 to 1.0 l per 100 kg of cement. Different dosages from those suggested must be previously tested through

concrete trials, in addition to consulting MAPEI Technical Services Department.

PACKAGING

Mapeplast R15 is available in 200 l drums or in 1,000 l tanks. On request, it can also be supplied in bulk.

STORAGE

Mapeplast R15 can be stored for 12 months in sealed containers protected from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapeplast R15 is not considered as dangerous according to the current regulations regarding the classification of mixtures. It is however recommended to wear gloves and goggles and to take the usual precaution when handling chemicals. For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

WARNING

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

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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

**Mapeplast
R15**



BUILDING THE FUTURE

Any reproduction of texts, photos and illustrations published here is prohibited and subject to prosecution

6357-5-2014 (GB)