

Mapemix R64

Versatile admixture for concrete with mild retarding action

DESCRIPTION

Mapemix R64 is a liquid admixture for concrete with flexible dosage that acts as a plasticizer at low dosages and as a superplasticizer at higher dosages, with a mild retarding action on setting time.

WHERE TO USE

Because of the high workability (consistency class S4 and S5 according to EN 206-1) obtained without excess water in the mix, concrete with **Mapemix R64** admixture is easy to place while fresh and has high performance characteristics when hardened.

Mapemix R64 is suitable for all applications which require high workability and a low water/cement ratio. Its uses are for:

- ready-mix concrete (especially in cold weather);
- pumped concrete;
- mass concrete.

Some application examples

Mapemix R64 is a plasticizer when employed in dosages from 0.3-0.7% (by weight of cement) and acts as a superplasticizer when employed in dosages from 0.8-1.2%.

Mapemix R64 is particularly suitable for the following applications:

- ready-mix quality concrete for structures with R_{ck} higher than 20 N/mm²;
- ready-mix concrete for watertight structures (with a water/cement ratio no higher than 0.55): purification plants, reservoirs, canals, tunnels, etc;
- for massive concrete element pours where it is necessary to reduce thermal peaks caused by the heat generated in cement hydration: dams, foundation-mats for high-rise buildings, etc.

TECHNICAL CHARACTERISTICS

Mapemix R64 is water solution of active polymers that disperse cement granules, with a slight retarding action on setting time for better retention of workability.

Mapemix R64's special action can be adjusted accordingly to obtain the results required (increased strength, improved workability, reduced cement factor) by varying the admixture dosage between 0.3% and 1.2% by weight of cement. The greater the dosage, the greater the effect.

RECOMMENDATIONS

Although there are no specific uses for which **Mapemix R64** is unsuitable, the following are effective alternatives:

- for preparing ready-mix concrete, especially in hot weather with long transport time,

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	liquid
Colour:	brown
Density according to ISO 758 (g/cm ³):	1.17 ± 0.03 a +20°C
pH according to ISO 4316:	8.5 ± 2.0
Specific action:	water reduction and/or improved workability
Collateral action:	initial retarding of hydration/retention of workability
Classification according to EN 934-2:	set retarding, high range water reducing, superplasticizer according to EN 934-2 tables 11.1 and 11.2
Classification according to ASTM C494:	type D
Chlorides according to ISO EN 480-10 (%):	< 0.1 (missing according to EN 934-2)
Alkali content (Na ₂ O equivalent) according to EN 480-12 (%):	< 4.5

Mapecfluid R104 or **Dynamon SR2** are more suitable for initial workability of the mix;

- for precast concrete, **Mapecfluid N200**, **Dynamon SP** or **Dynamon NRG** are more suitable for curing cycles used in precasting.

APPLICATION PROCEDURE

It is preferable to add **Mapemix R64** into the mixer after all the other ingredients (water, cement, aggregates).

The action of the admixture is more effective when added later.

Mapemix R64 is most effective when cement and aggregate grains are already wet, and least effective when the admixture is mixed with dry solids which will absorb some of it (especially if they are porous) and partially reduce its effectiveness. It is advisable to begin adding the admixture with an automatic dispenser when at least half of the water required for the mix has been introduced into the mixer.

COMPATIBILITY WITH OTHER PRODUCTS

Mapemix R64 is compatible with other products for producing special concrete, and especially with:

- **Mapecair AE** range admixes, air-entraining agents for producing concrete resistant to freeze thaw cycles;
- **Mapecplast SF**, the micro-silica powder admixture for producing “top-quality” concrete with strength, durability and impermeability;
- **Expancrete**, expansive agent for producing shrinkage-compensated concrete;
- fly ash for producing concrete with artificial pozzolan;
- **Mapecform Eco** or **DMA Form-Release Agents** for stripping concrete formwork;
- **Mapecure** range curing compounds for protecting concrete flatwork (floors, for example) against overly rapid water evaporation.

DOSAGE

Dosage by volume:

from 0.3 to 1.2 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

Mapemix R64 is available in 200 l drums or 1,000 l tanks. It is also available in bulk on request.

STORAGE

Mapemix R64 can be stored for 12 months in closed containers; protect from frost and direct sunlight.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapemix R64 is not considered dangerous according to the current regulation regarding the classification of mixtures. It is recommended to wear protective gloves and goggles and to take the usual precautions for the handling of 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**

**Mapemix
R64**

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