

Mapecube GEO

Strength Enhancer for Low-CO₂-Emission Concrete

FOR PROFESSIONAL USE ONLY

DESCRIPTION

Mapecube GEO is a chloride-free, strength-enhancing liquid admixture for concretes and mortars. It is designed to optimize the hydration of low-CO₂-emission binders.

WHERE TO USE

Mapecube GEO can be used in every concrete mix. It is particularly suitable for the production of alkaline-activated concretes with slag-based binders and with low or no clinker content.

Mapecube GEO is particularly suitable for precast concrete and ready-mix concrete with specific requirements, such as:

- High strength at early ages.
- Reduction or elimination of steam curing.
- Environment temperatures lower than 50°F (10°C).
- Optimization of production cycles.
- More rapid and efficient demolding.

TECHNICAL CHARACTERISTICS

Mapecube GEO is an innovative admixture made of nanoparticles in an aqueous suspension, obtained through a MAPEI patented process. It is compatible with traditional concrete admixtures and with polyether carboxylates (PCE) based superplasticizers.

APPLICATION PROCEDURES

For the best product performance, add *Mapecube GEO* to the concrete powder along with 80% of the mixing water. Mix until a completely homogeneous consistency is obtained. Then add a PCE-based superplasticizer and the residual amount of the mixing water to achieve the final consistency.

In the event of cold weather, follow these precautions:

- Keep the mixture components at a temperature higher than 41°F (5°C).
- Place the concrete during the daytime, taking advantage of higher temperatures.
- Do not place concrete when the temperature is lower than 14°F (-10°C).
- Keep water/cement ratio as low as possible.
- Protect the placed concrete with curing blankets, utilizing the heat generated by concrete hydration.

DOSAGE RATES

The recommended dosage ranges for traditional concretes are from 0.24 to 0.60 U.S. gals. of *Mapecube GEO* per 100 lbs. of cement (2 to 5 L per 100 kg), based on application temperatures and targeted performance.

The recommended dosage ranges for alkaline-activated slag-based concretes (geopolymers) varies from 1.2 to 4.8 U.S. gals. of *Mapecube GEO* per 100 lbs. of slag (5 to 20 L per 100 kg), based on application temperatures and targeted performance.

Dosages differing from those suggested must be previously tested through concrete trials and must involve consultation with MAPEI's Technical Services Department.

PACKAGING

Mapecube GEO is available in totes measuring 264 U.S. gals. (1 000 L).

STORAGE

Mapecube GEO can be stored for up to 6 months in sealed containers. Protect from freezing. Exposure to direct sunlight may vary the product's color but will not affect performance characteristics.

Technical Data

Consistency	Liquid
Color	Clear brown
Density	1.15 ± 0.03 g/cm ³
Main action	Strength enhancer and alkaline activator
pH	13.0 ± 1

Water-soluble chloride content	< 0.1 %
Alkali content (equivalent Na ₂ O)	< 4 %

ADDITIONAL INFORMATION

Refer to the Safety Data Sheet (SDS) for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA).

WARNING

The test results shown in the TECHNICAL DATA table were obtained in compliance with test methods and curing cycles, if applicable, defined in the industry standards referenced on the Technical Data Sheet. Please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

CONTACT INFORMATION

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Customer Service

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For the most current product data and BEST-BACKEDSM warranty information,
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