

Technological, chloride-free, anti-freeze additive, suitable for concrete casting, mortar patching and laying with cement-based adhesives at low temperatures. Accelerates setting and hardening times and enhances initial mechanical strength.



ANTIGELO

HIGH EXOTHERMIC REACTIVITY – The accelerated setting and hardening action at low temperatures of the ANTIGELO additive ensures, in concrete, mortars and adhesives prepared with hydraulic binders, the development of mass-related exothermic reactions specifically designed to compensate low environmental temperatures. A mix of reactive mineral salts interacts in the water-cement reaction, developing immediate hydration heat which guarantees applications at temperatures below +5 °C, the minimum limit for use with cement-based mixtures.

RAPID AND SECURE PARTING – The superior hydration induced by the ANTIGELO additive increases the initial mechanical strength of concrete and mortars, allowing for rapid and secure parting operations. The additive causes no reduction in final mechanical resistance, ensuring the performance of the cement-based mixtures to which it has been added.

PRACTICAL TO USE – Supplied in practical 1-kg bags, the additive ANTIGELO ensures optimum dosage with respect to the binder used. The product is mixed directly in the cement-mixer until fully dispersed, subsequently adding a minimum quantity of mixture water.

Developed by the Research and Development Division and guaranteed by the Training Centre.
Compliant with the CARE Project for the Protection of Health and the Environment:
Building Division (Method M4 – Action E503).

ANTIGELO

AREAS OF USE

Preparation of cement-based mixtures for concrete casting, fine-grain concrete, screeds, mortars and cement-based adhesives to be applied at low temperatures.

Use

Beams, pillars, slabs, load-bearing walls, screeds, bonding of flooring and covering materials.

Do not use

In dosages superior to those indicated if the inert materials are frozen and if it is foreseen that the environment temperature will fall below $-10\text{ }^{\circ}\text{C}$ during the 24 hours following casting.

PREPARATION OF SUBSTRATES

The substrate must be compact and clean, i.e. free from dust, oil and grease. Any loose or imperfectly anchored parts such as residual traces of lime, cement and paint must be removed. Roughen smooth surfaces. When casting, position the reinforcement rods with appropriate spacers so as to ensure the formation of an adequate metal-covering layer.

At low temperatures use wooden moulds, which are more suitable for thermal insulation of the casting.

INSTRUCTIONS FOR USE

Preparation

ANTIGELO is ready for use and supplied in 1-kg bags. In the case of low temperatures and in the presence of frost, mixtures for mortars, screeds and cement-based adhesives as well as fine-grain concrete and concrete must be prepared with components (ready-mixed, cement-based compounds, sand, gravel and cement) with a temperature of at least $+5\text{ }^{\circ}\text{C}$. The mixture water should be warm or used at the normal water supply temperature ($\geq +10\text{ }^{\circ}\text{C}$).

When adding ANTIGELO to the mixture, use one/two 1-kg bags for each 100 kg of cement used.

Application

Wherever possible, perform operations during the morning hours so as to benefit from higher daytime temperatures. Do not begin operations if it is foreseen that the temperature will fall below $-10\text{ }^{\circ}\text{C}$ in the hours immediately following application. Always use cements with more rapid setting and hardening characteristics, such as the Portland 42.5 R/ 52.5 R type. Mix with the lowest water/cement ratio permitted.

Protect work with a canvas covering, jute or paper bags or insulation materials in order to retain and exploit the hydration heat of the mixture.

Low-thickness applications of products do not benefit from the mass-related exothermic effect, and rapidly lose hydration heat. The effectiveness of ANTIGELO should thus be evaluated in relation to the temperature and the type of application required.

Cleaning

Tools used for the preparation of mortars and concrete to which ANTIGELO has been added can be cleaned under running water before setting begins.

SPECIAL NOTES

Use rapid cements of the Portland type, Class 42.5 R / 52.5 R, with dosages not smaller than 300 kg/m^3 . Carry out casting operations during the morning hours in order to benefit from higher daytime temperatures and sunlight when present. Protect works against frost, covering them with canvas in order to retain hydration heat inside the mass.

ABSTRACT

In the presence of low temperatures or when there is a risk of temperatures falling below zero during the night, add to cement-based mixtures a technical, anti-freeze additive such as ANTIGELO manufactured by Kerakoll. Recommended dosage: 1 – 2 % of the weight of cement. Protect works against direct exposure to all types of weather and frost during the hours immediately following application.

TECHNICAL CHARACTERISTICS

Appearance	White ready-mixed	
Apparent volumetric mass	≈ 0.79 kg/dm ³	UEAtc
CARE	Method M4 – Action E503	
Storage	≈ 6 months in the original packaging in dry environment	
Packaging	Bags 1 kg	

TECHNICAL DATA compliant with Kerakoll Quality Standard

Mixing ratio:		
- cement-based mixtures	≈ 1 – 2 kg of product for every 100 kg of binder	
- modified cement-based adhesive	≈ 200 g per 25-kg bag	
- cement-based adhesive	≈ 100 g per 25-kg bag	
- cement-based mortar	≈ 100 g per 25-kg bag	

At a temperature of +23 °C, 50% R.H. and no ventilation.

FINAL CHARACTERISTICS

Increasing of compressive strength:		
- after 3 days	≥ 30%	UNI 7109
- after 28 days	≥ 1%	UNI 7109

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

AVVERTENZE

- **Product for professional use**
- use mixture water at a temperature not lower than +10 °C
- do not use on ready-mixed, rapid-setting products
- the temperature must not fall below –10 °C over the following 24 hours
- make sure that the substrate and inert materials are not frozen
- if necessary, ask for the safety data sheet
- for further information please consult the **Kerakoll Worldwide Global Service +39-0536.811.516**



THE KERAKOLL GLOBAL SERVICE

Wherever you are, and whatever your project needs are, you can always rely on the Kerakoll Service: highly-efficient, global customer support matching the high quality of our products.

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Training Service - Professional training to support our quality

Guarantee Service - A long-lasting warranty

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KERAKOLL QUALITY STANDARD

In all units of the Kerakoll Group, before being considered suitable for production, products undergo stringent testing in accordance with the very high requirements set by the Kerakoll Quality Standard: a process supported by the Centre for Applied Technology which assists the work of researchers with its sophisticated resources and laboratories. At the Kerakoll laboratories the various elements of formulations are carefully analysed to identify and eliminate any factors of weakness by means of simulation of real working conditions in building sites. After the testing cycles, the new products are submitted to the extreme fatigue of the Safety-Test process.



SAFETY, HEALTH AND THE ENVIRONMENT

For an industrial system such as Kerakoll it is vitally important to ensure that human health and the environment are protected. The Kerakoll company policy is to ensure that every possible safeguard be taken to make sure that these factors are always considered, and regulations and specific methods have been developed over the years for this purpose at all levels of the organisation. The CARE Project is the result of the Group's concern for human health and the environment, and ensures that the Group's products are perfectly safe for use and that the building materials supplied to builders ensure a very high level of safety before, during and after their use.

The information given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building yards and the execution of the work, this information represents general indications that do not bind our Company in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.

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