



Rev 0  
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# TEKNACEM 401

Dry process grinding aid.  
High increaser of resistance and productivity



## DESCRIPTION

TEKNACEM 401 is an aqueous liquid additive based on inorganic salts together with linear, modified amines, which help to improve the grinding capacity of the ball mills. It acts by transferring the particles' attraction forces produced during the grinding operation, avoiding the agglomeration of fine aggregates. It is recommended as additive in the dry grinding of all kind of minerals and particularly of cements to which it gives more flowing and better smoothness reducing the pack-set during storage.

TEKNACEM 401 belongs to the family of quality additives, as it is a strong booster of the initial and final resistances booster.

## FEATURES

TEKNACEM 401 keeps clean the grinding parts and the armor of the mill, increasing in this way the refining efficiency. In terms of production, it reduces the energy required and the deterioration of all the parts of the machine as well as its maintenance interventions. In terms of energy consumed, it increases productivity by 15-30%.

Cements show the following advantages:

- It increases the finishing surface area;
- Improves the consistency of concrete;
- It gives the concrete a good smoothing reducing the pack-set during storage;
- It improves the wetting of the cement and its moisture;
- It improves the mechanical resistances after 2 and 28 days;
- It reduces the risk of false setting;
- It increases the flow of the cement mixtures in the moist form;
- It is compatible with all kind of additives for concrete.

## PHYSICAL PROPERTIES

Appearance	liquid
Colour	amber
Density at 20°C	1, 04 ± 0,02 g/cm <sup>3</sup>
pH a 20°C	10, 5 ± 1
Chlorides	none
Ebullition time	110°c
Freezing times	< 5°c
Inflammability test	negative
Solubility in water	total

## APPLICATIONS

TEKNACEM 401 gives better results in the grinding of blended cements where alongside the development of production are also sought high mechanical initial and final strengths.

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This allows sometimes a reduction of the clinker points improving the technical and economic balance. With TEKNACEM 401, excellent results were obtained even with super cements with low content of aluminate.

## INSTRUCTION FOR USE

TEKNACEM 401 is ready to use and is compatible with any other additives for cements produced by TEKNA CHEM SpA. It is placed into the mill together with the raw materials through a special dosing pump. If the mill has a variable power supply, the pump can be linked by an automatic adjustment system. For its chemical peculiarities it is suitable for all types of cement, particularly the limestone cements.

## DOSAGE

The standard dosage of TEKNACEM 401 is 0,025-0,045% w.w based on the weight of the cement.

Recommended dosage: 0,035% w.w on the weight of cement. Normally the dosage is directly proportional to the content of clinker or raw materials harder to grind.

### *Over dosage*

A dosage higher than that recommended in the preliminary tests can improve the grinding ability and productivity but not the mechanical resistances.

## STORAGE

The product should be stored close to the place where it will be used, away from direct sunlight and frost.

If stored in its original sealed packaging at temperatures between + 5 °C and + 35 °C it shall be valid for 12 months.

If stored for a long time at temperatures below 0 °C, this may lead evaporation due to crystallization, in which case the product can be used after heating at + 20°.

## PACKAGING

Bulk in tanks

Metal drums of 200 Kg

Tanks of 1040 Kg