



## TECHNICAL DATA SHEET

# TEKNACEM 401

Grinding aid and high strength improver

### GENERAL CHARACTERISTICS

This new additive unites in only one product all the features of traditional cement grinding aids – quality improvers at very low dosage rates.

TEKNACEM 401 acts upon the cement during the grinding process improving its fineness and increasing the productivity of 15 - 30%. It reduces the pack-set during storage and it improves both early strengths by up to 30% and late strengths by approximately 10% as well as flowability.

### APPLICATION FIELDS

TEKNACEM 401 can be used for all types of cement but gives the best results in the grinding results in mixed cement types.

The use of TEKNA CHEM 401 results in either significantly reduced energy consumption while obtaining cement with the same fineness as before or significantly reduces the fineness of the cement produced at equal production rates and improves the mechanical characteristics of the cement.

The benefits in either case range from 10 to 20% for type 32,5 and 42,5 cements while even greater benefits are possible for type 52,5 cement, particularly when hard clinker is used.

TEKNACEM 401 can also be used with success in cements which were cut with lime, pozzolana, microsilicate, etc., but these applications need to be determined by laboratory tests.

### CHEMICAL AND PHYSICAL CHARACTERISTICS

TEKNACEM 401 is an aqueous solution of organic salts and modified amines.

State	liquid
Color	yellow – reddish
Density at 20°C	1.04kg/dmc ± 0.01
pH at 20°C	7 – 8

Boiling temperature	110 °C
Freezing temperature	-5 °C
Solubility in water	soluble at any ratio
Chloride	free

### DIRECTIONS FOR USE

TEKNACEM 401 is introduced into the grinder together with the raw materials by means of a special dosage pump.

In grinders having a variable feeder system the pump can be fitted with an automatic regulator. Use only as directed in the material safety data sheet.

### DOSAGE

The standard dosage of TEKNA CHEM 401 is 0.02 – 0.04% of the total weight of the cement but this can be modified, after laboratory testing, in function of the type of cement and of the final characteristics desired. Cement types 32,5 and 42,5 typically require a dosage of 0,035% while cement type 52,5 and white cements require a higher dosage rate. Higher dosage rates increase the productivity but not the strengths.

### STORING AND PRESERVING

The product is best kept at a temperature between -5°C and 50°C. At rest, and temperatures below -5°C crystallization of the salts contained in the solution and separation of the active substance might occur. Thus it is recommended to protect the container from lengthy exposures to low temperatures.

If such phenomenon should occur then the product can be used after heating beyond 20°C.

### PACKAGING

TEKNACEM 401 is supplied in 220 kg drums, in 1000-liter plastic containers or in bulk.



TEKNA CHEM S.r.l.  
20050 Canonica di Triuggio (Mi) - ITALY - Via M. Buonarroti, no. 5/7  
Phone +39-0362 91.83.11 / 91.92.30  
Fax +39 0362-91.93.96  
Email: info@teknachem.it

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