

SCHEMA TECNICA
TECHNICAL DATA SHEET

ACROMTEK

REDUCING AGENT FOR THE PREPARATION OF CEMENT WITH REDUCED CONTENTS OF HEXAVALENT CHROME

TECHNICAL CHARACTERISTICS

	LIMIT	METHOD
Title (Na ₂ S ₂) %	26-28	ICS0032

Density at 20°C: g/ml 1,260 ± 0,020 ICS0005

PHYSICAL AND CHEMICAL PROPERTIES

	TYPICAL PARAMETERS
Chemical constitution:	didodium disulphur solution.
Appearance:	red liquid
Compatibility:	compatible with products employed in the specific use
Storage stability:	1 year if preserved in original sealed packaging and at a temperature between +10°C and +35°C.

CHARACTERISTICS

ACROMTEK belongs to big family of polysulfures and by-products for the preparation of low chrome hexavalent cements .

Hexavalent chrome can be present, in traces, in raw materials used in the production of cement or it can be formed in oxidizing conditions of the grinding of the clinker.

In alkaline water solutions ACROMTEK reduces the hexavalent chrome to trivalent chrome. Through the application of ACROMTEK the cement, once hydrated, must contain less than the 2 ppm of hexavalent chrome, as foreseen by the directive 2003/53/CE.

The advantages that come using ACROMTEK, compared to the actual products present in today's market (stannous sulfate and hydrated ferrous sulfate) for the same application, are:

- Economic advantages in the relation rendering/price

- Easily storable in the liquid state
- Stable solutions not oxidable spontaneously
- Easily dosable in continuous
- Injectable in the clinker grinding phase at temperature inferior to 70°C (in trials made at T ≤ 120°C there is not anyway any loss of the characteristics)
- Compatible con grinding aids
- Compatibile with quality aids normally employed
- It doesn't provoke red points in the manufactured article (normally caused by the trivalent iron)
- It does not give retarding effects and negative influences in the setting
- Insolubilize copper, lead, cadmium, zinc, arsenic, etc.

APPLICATIONS AND CONCENTRATIONS OF EMPLOYMENT

ACROMTEK - if applied in optimal conditions – needs employment percentages:

- 0,06% for cements containing quantities of Cr⁶⁺ ≤ 7 ppm
- 0,08% for cements containing quantities of Cr⁶⁺ ≤ 30 ppm

Naturally such quantity can vary according to various factors such as:

1. actual hexavalent chrome percentages
2. reactions competitive with the hexavalent chrome reduction due to the presence of heavy metals
3. environment unfavorable to the reduction, that is elevated temperature in presence of air and for prolonged times
4. aiding methodology

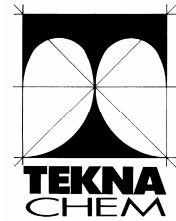
According to the experience, in order to optimize the rendering of the product, it is recommended to effect the



TEKNA CHEM S.r.l.

Via M. Buonarroti, 5/7
20050 Canonica di Triuggio (MI) ITALY
Tel. +39 0362 9183 11 / Fax: +39 0362.91 93 96
E-mail : info@teknachem.it

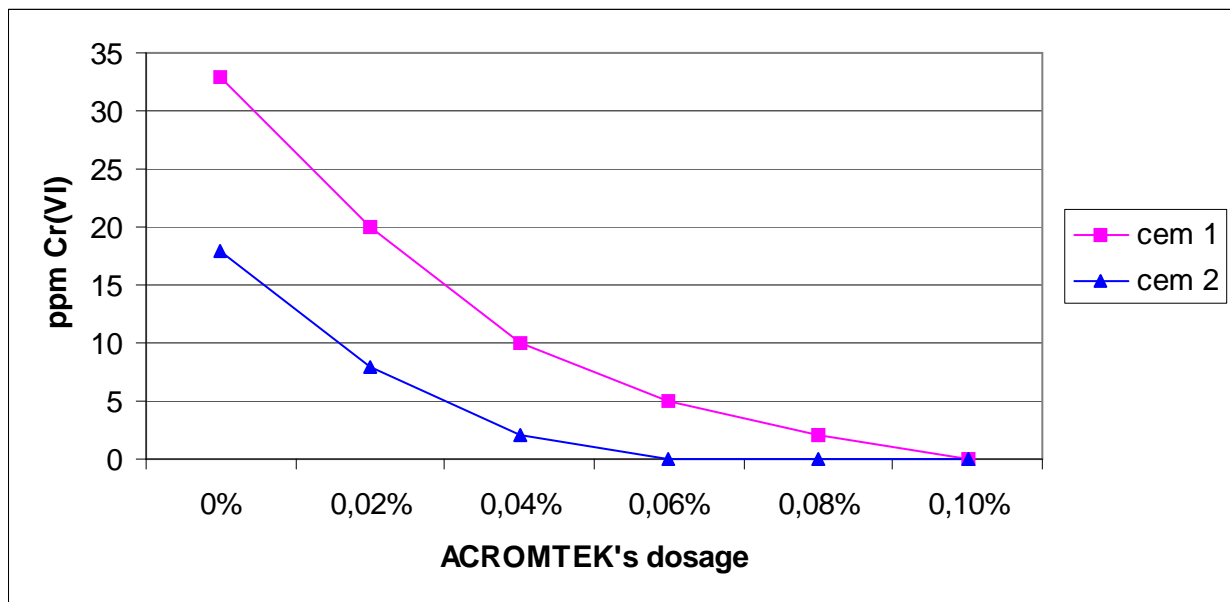
The information contained in this data sheet, even though they represent the most advanced stadium of knowledge, they don't exempt the user from the execution of accurate preliminary tests under its own conditions of employment and exercise. Therefore every responsibility is declined for the improper use of the product



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treatment of the cement in the terminal phases of the productive cycle. Even better if ACROMTEK is dosed through a dosing pump with a series of atomizing nozzles, to guarantee its precision, dosage homogeneity in the preceding phase to the packaging.

Operating in this way the percentages of use for cements containing up to 10 ppms of hexavalent soluble chrome, are illustrated in the following graph: on the ordinates axle it is brought the hexavalent chrome set-up and on the abscissas one the times of contact for water and cement aided with different percentages of ACROMTEK.



INSTRUCTIONS

ACROMTEK clearly gives alkaline reaction and, being caustic, it must be handled with precaution. Besides it doesn't have to stay for a long time in contact with air, therefore it is necessary to close carefully the packaging after every collecting.

NB The present graphic is the result of tests effected on mixes manufactured with 2 cements with different Cr(VI) concentrations:

Cement type: 42,5 R Environment T: 20 °Cs
cem1: [Cr(VI)] = 33 ppms cem2: [Cr(VI)] = 18 ppms

The reduction results exclusively refer to the above mentioned samples, at the quoted temperature. Since the reduction reaction with ACROMTEK involves, besides the Cr(VI), other heavy metals present in the cement, the mentioned dosages could vary both according to the concentration of these as well as according to the application's environmental conditions.

Therefore preventive industrial tests are recommended.

This technical data sheet annuls and replaces every preceding edition.



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