



CHEMATEX DYES & CHEMICALS

SEQUESTRANT TA

Complexing agents based on Ethylene-Diamine-Tetra-Acetic acid.

PHYSICAL PROPERTIES

Appearance	:	White powder
pH value (1% solution)	:	11 - 12
Component	:	~ 85% EDTA tetrasodium salt.
Bulk density	:	~ 0.55 g/ml
Solubility	:	miscible with water in all proportions.
Storage	:	When stored correctly in sealed containers, it has a shelf life of 2 years.

FEATURES

SEQUESTRANT TA forms water-soluble 1:1 complexes with multivalent metal ions. One molecule of complexing agent binds one metal ion. Although binding - as an ionic reaction - takes place rapidly, with the temperature having only a slight effect, it is influenced to a greater extent by the pH of the solution. Generally speaking, the resultant complexes are most stable in the alkaline pH range. No precipitation of metal hydroxides or carbonates occurs and the deposition of boiler scale or metal soaps is prevented.

Depending on the alkali concentration, the amount of SEQUESTRANT TA are necessary to complex water-hardening substances equivalent to 1° German hardness (1.25° English hardness).

at pH 9	0.06	g/l	SEQUESTRANT TA
at 20 g/l NaOH	0.08	g/l	SEQUESTRANT TA

SEQUESTRANT TA also forms water-soluble complexes with heavy-metal ions. In the optimum pH range, 1g of SEQUESTRANT TA complexes the following amounts of heavy metals.

Metal	Optimum pH range	Amount of complexed metal ions
Iron	1 - 6	125 mg Fe ²⁺ or 125 mg Fe ³⁺
Manganese	5 - 9	122 mg Mn ²⁺
Copper	1.5 - 13	142 mg Cu ²⁺
Lead	3 - 13.5	463 mg Pb ²⁺

Outside the optimum pH range, the complexing power is drastically reduced.

本数据是基于精密试验所得，以供阁下参考。对于使用后所得之一切结果，不负任何责任。这是因染厂有许多的变量超出我们所能控制之范围。本公司仅保证产品之质量稳定不变。

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APPLICATION

Many wet processes are impaired by water-hardening substances, which enter the treatment liquors not only via the process water, but also in the textile material. Grey cotton is a typical example.

- ***Bleaching***

In chlorite bleaching.

0.5 - 2 g/l SEQUESTRANT TA

removes water-hardening substances and heavy-metal ions. This improves the handle and hydrophilic properties of the cotton. In hypochlorite bleaching liquors, SEQUESTRANT TA is oxidized.

- ***Dyeing***

SEQUESTRANT TA remove water-hardening substances from cotton and from the treatment baths and prevents precipitation of dye caused by calcium and magnesium salts. More brilliant shades are often obtained on cotton treated with SEQUESTRANT TA and there is no reduction in the rubbing fastness and levelness of the dyeings due to water-hardening substances. Bronzing does not occur with sulphur dyes. In certain circumstances, SEQUESTRANT TA is able to remove the metal from metal complex dyes and this may result in shade variations or a reduction in fastness. Preliminary trials are therefore advisable when SEQUESTRANT TA is used in the dye bath or in the processing of colored goods.

- ***Fluorescent***

When it is applied together with fluorescent brighteners,

0.5 - 1 g/l SEQUESTRANT TA

counters any reduction in brilliance or in the standard of white that may be caused by water-hardening substances.

- ***Aftertreatments***

After material has been boiled off and / or bleached, the absorbency and degree of whiteness are improved if the first rinsing bath contains :

0.5 - 1 g/l Sodium hydroxide

0.5 - 2 g/l SEQUESTRANT TA

After dyeing, and addition of

0.5 g/l SEQUESTRANT TA

to the rinsing bath prevents any dulling of the dyeing caused by hard water.

... END ...

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