

TECHNICAL TUESDAYS

TOPIC: Sequestering Agent

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What is Sequestering Agent?

Sequestering agent is a substance that removes ions from a solution system by forming a ring which does not have chemical reactions with the ion which is removed.

Sequestering agents are commonly used for removing water hardness. They combine with Calcium and Magnesium ions as well as other heavy metal ions in hard water.

They form molecules in which the ions are held so securely (sequestered) that they can no longer react.

Functions of Sequestering Agent in Textile Processing:

The most undesirable impurities in Fibre, Caustic Soda are divalent and trivalent cations, e.g., Ca^{++} , Mg^{++} , Cu^{++} , Fe^{+++} etc.

These ions increase the hardness of the process bath and generate iron oxides in the bath. The ferric oxide reacts with cellulose and creates small pinholes on the fabric surface; it also damages machinery by scale formation in nozzles and base.

To overcome these harmful effects in scouring and bleaching baths, adequate amounts of sequestering agents must be used. Sequestering agents prevent divalent and trivalent metal ions, e.g., Cu^{++} , Fe^{+++} , Mn^{++} , Ca^{++} , Mg^{++} etc. from interfering with the chemical processing of the textile material.

It prevents catalytic damage of cellulosic fibres in the bleaching bath during hydrogen peroxide bleaching.

Wishing you a great week ahead!

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arc@resil.com | www.resil.com.