

Technical Tuesday

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Dye Fixing Agent

What is dye fixing Agent?

The Chemical agent which helpful to fix the unfixed dye to the fiber after dyeing, helpful to improve the fastness of the applied dye.

Mechanism of Dye fixing Agent:

The Dye-fixing agents are cationic with long cations and short anions.

The Direct cotton dyes and the hydrolyzed Reactive dyes have long anions and short cations.

Wherever the unfixed color is exhausted in to the fibres the long anions of the Dyestuff react with the long Cations of the Fixing agent and would precipitate inside the fibres getting trapped in situ.

Since the complex is insoluble they cannot be removed by washing. Therefore the wash fastness will be improved.

The insoluble complex formed outside the fabric in the bath will also precipitate and they need to be kept in suspension with suitable dispersing agents during soaping and removed; other wise rubbing fastness may be affected.

This situation would arise if the Dyeing parameters were not properly monitored and controlled or by use of dyestuffs whose exhaustion characteristic is very high and the reactivity (fixation) is relatively very low.

The chances are that the exhausted, but unfixed hydrolyzed dyestuff will leach out during washing and hence the need to resort to Dye fixing agents.

It is to be kept in mind that present day Reactive Dyes have exceptionally high exhaustion and fixation (reactivity) characteristics very close to each other and therefore use of Dye fixing agents are very restricted.

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