

TECHNICAL TUESDAYS

TOPIC: Acid Dyes

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What are Acid Dyes?

An acid dye is a salt of a sulfuric, carboxylic or phenolic organic acid. The salts are often of sodium or ammonium.

Acid dyes are typically soluble in water and possess affinity for amphoteric fibers while lacking direct dye's affinity for cellulose fibers.

Different types of acid dyes

Acid dyes are classified into several groups, based on the leveling properties, economy of dyeing and fastness, however, these are generally classified into three classes:

1. Neutral acid dyes :

They are fast acid dyes, having medium to good wet fastness properties (some dyes have poor light fastness in pale shades). Many of the dyes are used as self-shades only. These are applied to the fiber in a weakly acid or neutral pH.

2. Weak acid dyes:

These dyes belong to the milling class of dyes. They have good fastness properties but light fastness is moderate to poor.

3. Strong acid dyes:

They are applied in a strongly acidic medium and are also called leveling dyes. They have limited wet fastness properties. These dyes produce excellent combination shades.

Properties of Acid Dyes:

1. They are anionic in nature.
2. They are suitable for wool, silk, polyamide and modified acrylics.
3. They are applied in a strongly acidic to neutral pH bath.
4. These dyes have no affinity for cotton celluloses, hence not suitable for celluloses.
5. These dyes combine with fiber through hydrogen bonds, vander waals forces or ionic linkages.

Wishing you a great week ahead!

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