ANC ENZYME SOLUTIONS PTE LTD
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Dye Acid F

Dye Acid F is an acid donor with strong buffering action for use in either atmospheric or pressurized dyeing of polyester fabrics. Normally, acetic or formic acid, with or without buffering, is used to control the dye-bath pH. These organic acids are volatile at temperatures below 100°C. Due to this volatility, the dye-bath pH will fluctuate and adversely affect dye-shade reproducibility, increasing the likelihood of faulty dyeing results.

General Characteristics:

Appearance:	Transparent liquid.
Composition:	Non-volatile organic acid and special buffering agents.
Ionic Charge:	Anionic.
Solubility:	Soluble in water.

Features:

1. Dye Acid F is a unique dye acid compositionally different from other dye acids on the market. Dye Acid F does not contain any SO_4^{-2}, Cl^{-1}, PO_4^{-3}, or other inorganic acid ions that may contribute to greater likelihood of machine corrosion.
2. Dye Acid F is a non-corrosive acid donor that will not degrade cellulose or cause machine corrosion, unlike other dye acids.
3. Dye Acid F contains a strong buffer that allows for steady pH levels and better dye shade reproducibility.
4. Dye Acid F is neither oxidative nor reductive in nature; it will not affect dye shade.
5. Dye Acid F maintains the pH value of the dye liquor within +0.1, before and after dyeing. This narrow pH range cannot be achieved with acetic or formic acid.
6. Equivalent amounts of Dye Acid F in different dye-baths will provide nearly identical pH values, regardless of water quality or dyestuff used. The use of Dye Acid F will make checking dye-bath pH levels before each dyeing optional, allowing for increased efficiency and reproducibility.
7. Dye Acid F is very suitable for use during the dyeing of cross-woven or knitted polyester/spandex at 120-130ºC. The dye-bath pH will remain more constant; this minimizes any degradation of spandex that may occur.

Application Method:

Dye Acid F, by virtue of its strong buffering action, maintains a pH range of 4.8-5.0, which is an ideal range for polyester dyeing. Acetic acid, on the other hand, requires that the initial bath pH be 4.0-4.5 in order to end with a final bath pH of 4.5-5.0; acetic acid does not provide pH buffering in the dye-bath. A dosage of 0.3-0.4 g/l of Dye Acid F is sufficient to maintain a pH range of 4.8-5.0; the pH will remain nearly constant throughout the entire dyeing process.

Technical Service

ANC Enzyme Solutions will assist customers with the use of our products in applications development.