

Technical - Information

AVCO-GEN DOA

DISPERSING AGENT FOR OLIGOMERS IN POLYESTER DYEING

AVCO-GEN DOA is a dispersing agent used in polyester dyeing to overcome the problem of re-deposition of oligomers onto the fibre and on the dyeing machine walls as a white dust.

AVCO-GEN DOA is dispersing the PET oligomers which diffuse out from the inside of the polyester fibres to the surface of the fibres and to the dyeing liquor during the high temperature dyeing process. AVCO-GEN DOA keeps the oligomers finely dispersed in the liquor and prevents precipitation of the oligomers on the fibre surface and on the machine walls.

SPECIFICATIONS:

Appearance	Yellow to yellowish brown liquid.
Chemical nature	Aqueous solution of sulfonated surfactants.
Solubility	Miscible with water at any ratio.
pH (10% sol.)	8 ± 1
Ionic type	Nonionic to weakly anionic.
Compatibility	Stable to dilute alkalis, dilute acids and electrolytes under the normal conditions. Compatibility with nonionic and anionic products. Stable up to 500 ppm CaCO ₃ .
Storage	Stable for at least 9 months if stored under controlled conditions.

PROPERTIES & USES:

1. Dispersing agent for oligomers in disperse dyes dyeing processes. Can be applied in the dyeing bath with the usual levelling agents, carriers and dispersing agents.
2. Prevents precipitation of oligomers deposits on yarns and fabrics surface and on dyeing machine walls.
3. Does not affect the colour yield and the shade of the dyeing.
4. Can be washed-off easily from the treated fibres at any temperature.
5. Does not affect the stability of the dyestuff dispersion.
6. Does not affect the light fastness of the dyeing.
7. Recommended for dyeing polyester, triacetate and blends.

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APPLICATION:

Recommended for dyeing in exhaust dyeing processes such as beam dyeing and jet machines.

DOSAGE:

0.5 – 2 g/l AVCO-GEN DOA is normally sufficient to keep oligomers in dispersion form and prevents re-deposition of oligomers (trimers) on dyed fabric.

Following is an example of a HT dyeing procedure for polyester in jet machine:

1. Warm the bath to 50 - 60°C and add 0.5 - 2 g/l AVCO-GEN DOA (pre-diluted)
2. Adjust the pH to 4 - 5 with acetic acid or with AVCO-CID PHS (acid buffer).
3. Add 1 - 2 g/l AVCO-NAL PS (levelling agent).
4. Add the disperse dyestuffs (pre-dispersed in water and filtered).
5. Raise the temperature to 125 - 135°C and dye for 30 - 45 minutes.
6. Cool down slowly to 80°C and drop the bath.