

AVCO-FAST PDB

FIXING AGENT FOR PIGMENT DYEING WITH DYEFIX PIGMENT AND TEXTILE FINISHING

AVCO-FAST DY is a self cross linking copolymer, suitable for pigment dyeing of textile fabrics by padding methods and by exhaust pigment dyeing method with DYEFIX pigments. AVCO-FAST DY is recommended also as a soft copolymer dispersion used for finishing textile fabrics. It has fiber protecting properties and is used in resin finishing recipes to improve abrasion resistance and dimensional control.

SPECIFICATION:

Appearance	Milky white liquid
Chemical nature	Preparation of copolymer in aqueous dispersion.
Ionic nature	Non-ionic.
pH (10% sol.)	3.5 – 4.5
Solubility	Miscible with water at any ratio
Mechanical stability	Good
Resistance to Electrolytes	Good
Re-dispersibility	Good
Compatibility	Can be mixed together with all nonionic and anionic auxiliaries, pigments and fillers used in resin finishing and pigment dyeing. Compatibility with cationic products should be evaluated before use.
Storage	Product should be stored in a closed container, and protected against frost. Shelf life is at least 12 months

PROPERTIES & USES:

1. AVCO-FAST PDB is a very soft copolymer, which has very good running properties on exhaustion, padding and coating equipment.
2. AVCO-FAST PDB has good compatibility with all types of catalysts and auxiliaries used in textile dyeing and finishing.
3. Can be used for one step dyeing and resin finishing.
4. The copolymer film when cured, is very clear, and does not impair pigment brightness and color.
5. Can be used with all types of textile fibers and blends.
6. Wash fastness can be improved by adding a melamine cross-linking agent.

The information given in this bulletin is, to the best of our knowledge accurate. It is intended to be helpful is not to be considered a guarantee.

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7. Fabrics finished/dyed with AVCO-FAST PDB have a soft and dry handle, with good fastness to light, washing and rubbing.
8. Dyed fabrics can be overprinted by aqueous pigment printing system, or printed fabrics can be over dyed and finished in one step.
9. Pale to medium shades are obtained by the padding method, but, depending on the substrate, it is also possible to produce deep and brilliant shades with good fastness.
10. AVCO-FAST PDB is used in exhaust pigment dyeing process, to improve washing fastness as well as wet and dry rubbing fastness.
11. AVCO- FAST PDB is recommended as a soft polymer dispersion for up-grading textile fabrics finishing recipes.
12. AVCO- FAST PDB lowers the reduction in abrasion resistance of finished fabrics, and thus reduces the tendency to pilling.
13. Amount of DMDHEU resin in polyester / cotton finishing bath can be lowered when using AVCO-FAST PDB in the recipe, and less reduction in tear strength is obtained.

APPLICATION:

To achieve the best possible fastness it is essential for the fabric to be given a thorough pretreatment including de-sizing, boiling off or bleaching and rinsing to receive uniform absorbency. The fabric should be finished neutral or slightly acidic.

1. Continuous Pigment Dyeing Process with DYEFIX PIGMENTS

Pad at room temperature with the following recipe:

DYEFIX pigment (pre-dispersed in water)	X	g/l
AVCO- FAST PDB	40 - 150	g/l
Anti-migrating agent (AVCO-SILS, AVCO- ANTIMIGRANTD)	5 - 30	g/l
Acid donor catalyst such as di-ammonium-phosphate,	2 - 10	g/l

The amount of AVCO-FAST PDB depends on the quality of the goods, the depth of shade, and the desired handle and fastness properties required. The following ratio between DYEFIX pigment and AVCO-FAST PDB is suitable:

Up to 4 g/l	DYEFIX pigment -	40 -60 g/l	AVCO- FAST PDB
Up to 10 g/l	DYEFIX pigment -	60 - 100 g/l	AVCO- FAST PDB
Up to 20 g/l	DYEFIX pigment -	100 – 150 g/l	AVCO- FAST PDB

Drying:

The padded fabrics are dried in the hot flue or stenter. Care should be taken to ensure that the drying is uniform.

Fixation:

After drying the goods are subjected to dry heat curing treatment. The fixation conditions depend on the type and quality of the fabrics, and the type of machines.

The usual temperature-time relationship re as follows:

4-5	minutes at 150°C
3-4	minutes at 160°C
2-3	minutes at 170°C
1-1.5	minutes at 180°C

After wash

After wash is not a must, unless the fabric is subject to a further water repellent finish such as fluorocarbon treatment.

2. Exhaust pigment dyeing process with DYEFIX Pigment

After treating in the exhaust DYEFIX pigment dyeing procedure with AVCOFIX PDC. In the bath before washing, add AVCO- FAST PDB to fix the pigment remained on the fabric. Dry at the highest temperature possible.

Recommended dosage :

DYEFIX Pigment (% owf)	AVCO-FAST PDB (owf)
< 2%	5%
2 – 3%	5 - 10%
>3%	10 - 20%

Treat at 40°C in 20 min.

Washing fastness (ISO105-C03) depends on the color and shade is 4 to 4-5.

Rubbing fastness (ISO105-X12) depends on the color and shade is 2 to 3.

3. "Wash out" look - padding application

Apply pigments to the fabric in the regular application procedure as in section (1) above, but quantity of AVCO-FAST PDB is reduced and quantity of DYEFIX pigment is increased. After fixation continue with an hot soaping procedure on the fabric or on ready made garments.

4. Resin finishing recipe – easy care finish

To the resin finishing bath add 25-75 gr/l of AVCO-FAST PDB.
Pad, dry and cure as explained above.

5. Anti pilling finish

To the finishing bath add 20-50 gr/l of AVCO-FAST PDB.
Pad, dry and cure as explained above.

6. Soft coating of textile fabrics.

Prepare a coating paste
Water – 800-150
AVCO-FAST PDB – 150-750
AVCO-THICKENER A – 60-20
Ammonia (25%) – 3-10 (adjust to pH=7)
Coat, dry and cure as usual.