
Technical Information

January 2002

BASF

COLOR FAST FINISH

The BASF Color Fast Finish System is designed for single step continuous pigment dyeing and finishing of cotton, rayon, acetate, triacetate, polyamide, polyester as well as other fabrics and their blends.

Color Fast Finish

BASF COLOR FAST FINISH

BASF COLOR FAST FINISH SYSTEM utilizes:

HELIZARIN BINDER PAD N - a very soft non-yellowing binder

SILIGEN PAD - unique antimigrant system.

BASF PAD N COLORANTS - nonionic, aqueous dispersions. They contain a concentration of pigment and dispersants that have been established to provide maximum dispersion and stability.

This system is suitable for producing pastel, light and medium depths of shade. They can be employed either as self-shades or can be combined with one another in any proportions for producing compound shades

These components make it possible to pigment pad dye, woven or bulky fabrics, such as knits, with excellent levelness and color fastness.

This system can be run as a non-resinated finish formula or a full finish formula. The colorants of choice for this system are the BASF PAD N COLORS.

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Advantages

Application Easy and quick one step coloration and finishing.

Pad liquors are easily prepared at room temperature.

Excellent pad bath stability resulting in, uniform shades being produced from one end of a run to the other and equipment soiling is minimized.

Minimal equipment needed.

A full range of pastel to medium shades is obtainable. Colors as applied and dried are final in shade. No developing operations are necessary.

No after-washing or after treatment is required. The fabrics processed with BASF Color Fast Finish are suitable for over-printing.

Versatile

They can be applied in conjunction with resin finishes, catalysts and other auxiliaries.

Appealing results

Soft, smooth handle with uniform coloration, due to the unique binder/antimigrant combination.

Fastness

Excellent fastness both to washing and scrubbing when used in conjunction with proper auxiliaries. Excellent fastness to light of many colors, even in pastel shades. Excellent fastness of selected colors to chlorine, dry cleaning, perspiration and gas fading.

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Application

BASF COLOR FAST FINISH SYSTEM can be employed in various combinations as follows:

Depending upon the type of fabric to be dyed, the depth of shade desired and the specific fastness required.

1. In conjunction with various auxiliary chemicals.
 - a. As a fabric not to be resin finished
 - b. To be post resin finished
2. In conjunction with most resin finishes for simultaneous dyeing and finishing.

Ordinarily, BASF COLOR FAST FINISH SYSTEM is highly resistant to changes from normal finishing applications. However, it is essential that all finishes be thoroughly checked in the laboratory before processing any yardage in the plant.

Formulation

1 Dyeing

<i>(a. No resin finish or b. post finish)</i>	1.0 - 2.0 g/l	Kieralon[®] JET-B Conc.
	20.0 - 40.0 g/l	Helizarin[®] Binder PAD-N
	.0 - 20.0 g/l	PAD N Colorants
	5.0 - 20.0 g/l	Siligen[®] PAD
	5.0 - 10.0 g/l	Glaubers Salt (pre-dissolved)

2 Dyeing & Finishing

1.0 - 2.0 g/l	Kieralon[®] JET-B Conc.
20.0 - 40.0 g/l	Helizarin[®] Binder PAD-N
20.0 - 30.0 g/l	Fixapret[®] ECO
.0 - 30.0 g/l	Siligen[®] VN
.0 - 10.0 g/l	Siligen[®] SIN
10.0 - 20.0 g/l	PAD N Colorants
0.0 - 10.0 g/l	Siligen[®] PAD
5.0 - 10.0 g/l	Glaubers Salt (pre-dissolved)
5.0 - 10.0 g/l	Catalyst MC (pre-diluted)

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Mix Make-Up Procedure

Order of addition of the bath components is critical and should be added according to the following schedule. The ingredients should not be pre-mixed in their concentrated form. Although the PAD N colorants can be pre-mixed, diluted with water and strained prior to addition.

The following order of addition is recommended for bath preparation:

1. Fill at least one-half the required volume of water into the mix tank.
Hot water should not be used in the bath make-up or product dilutions. The final temperature of the pad bath should not exceed 95° F.
2. Adjust pH and/or hardness depending on the water.
3. Add Kieralon JET-B Conc., stir well.
4. Add HELIZARIN BINDER PAD-N; stir.
5. Add resin and softeners while stirring.
6. Add PAD N colors pre-diluted 1:2 with water; stir, bulk to near volume.
8. Add Siligen PAD, stir.
9. Add Glauber's salt when required, pre-dissolved 1:5 in water; check its pH, stir bath. *A pH correction with acetic acid is required when the pH of the dissolved Glauber's salt is over 8.5.*
10. Add Catalyst MC, pre-diluted 1:2 in water; stir bath.
11. Agitate bath 5 - 10 minutes.
12. Strain bath while loading padder pan.

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Special Precautions

Because of their low viscosity, some layering of PAD N colorants may occur. Please mix containers well before each use.

The ideal bath pH is above 7.0, however, when resin and catalyst is used the bath can be expected to be on the acid side. In this case the bath should be adjusted to a pH of 5.0 minimum, with aqueous ammonia or a mild amine. Even though Pad N products are designed to be stable under moderately acid conditions. The benefits are increased mechanical stability of the systems and less chance of pad roll build up.

After the pad liquor is prepared, it should be strained into the pad box.

It is important to check and to correct the pH during the run.

Padding, Drying, Curing

Fabrics to be dyed with The Color Fast Finish System should be properly prepared, they must have low residual alkalinity and should be dried uniformly before they are padded.

Padding is carried out at room temperature on a two- or three- bowl padder. Most plants use padders with pressures set at 4 to 10 tons. Padders having two rolls on the softer side (for example, 65 Shore Durometer hardness for the top roll and 75 for the bottom roll) provide the best results. Padding ordinarily is carried out at a cloth speed of 50 - 80 yards per minute, although higher speeds have been obtained. Rolls that touch the goods should be free turning to prevent streaks and unevenness.

The pad liquor should be fed continuously from a storage tank or else recirculated so as to maintain a constant level. Unless the liquor is being recirculated, it should be stirred in the storage tank with a paddle or a mixer every 15 – 20 minutes. The fabric leaving the padder ideally should be between 30 - 70% wet pickup, depending upon the type and construction of the fabric. In general, the less the percentage of wet pick-up, the less is the likelihood of migration.

When either dyeing or dyeing and resin finishing in one bath the fabric should be predried to a lower moisture content in a predryer to prevent migration. The fabric should then enter a frame for curing and for obtaining the desired width or alternatively, pass over drying cans and then finished and cured.

The time and temperature required for curing depends upon the type and weight of the fabric and other factors. Curing for 1½ minutes at 350°F is ample. Other schedules may be developed by trial.

Fabrics to be subsequently resin finished can simply be dried and then cured in the resin finishing operation.

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Cleaning Equipment

The padder, mixing tanks, storage tanks, etc., can be cleaned easily with water, using a high-pressure hose. Staining on the pad rolls can be cleaned by wiping with a rag wet with CLEANER 06-50535 either as is or diluted with water. Pipe lines can be cleaned by running water through them.

Storage

The components of the Color Fast Finish System should be stored in tightly closed drums or other containers, away from steam pipes or other sources of heat. In cold weather they should be protected against freezing. It is preferable to store above 40°F. They can be maintained free from dirt or grit by exercising care to prevent dirt on top of the covers of drums or other containers from dropping into the colors and auxiliaries when the covers are lifted and by replacing covers as quickly as possible.

Modifications

The Color Fast Finish System can be modified in order to obtain specific desired fabric properties.

For example, if soft handle is not a major consideration, HELIZARIN® BINDER HIT can be substituted for the HELIZARIN® BINDER PAD-N, while still maintaining excellent running and fastness properties. For those situations when the ultimate color fastness to rubbing and washing is needed, PERAPRET® N-U can be included into the COLOR FAST FINISH recipe.

Please refer to the specific bulletins on HELIZARIN® BINDER HIT and/or PERAPRET® N-U for specific recommendations.

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Safety

When using this product, the information and advice given in our Safety Data Sheet should be observed. Due attention should also be given to the precautions necessary for handling chemicals.

We know of no ill effects that could have resulted from using these BASF Color Fast Finish products for the purpose for which it is intended and from processing it in accordance with current practice.

According to the experience that we have gained over many years and other information at our disposal, these BASF Color Fast Finish products do not exert any harmful effects on health, provided that it is used properly, due attention is given to the precautions necessary for handling chemicals, and the information and advice given in our Material Safety Data Sheet are observed.

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Note: Material Safety Data Sheet is available upon request.

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The BASF logo consists of the letters "BASF" in a bold, black, sans-serif font. The letters are closely spaced and have a slightly irregular, blocky appearance.