



alfaKimya

www.alfakimya.com

SUPERFIX
REACTIVE DYES

COMPANY

www.alfakimya.com

PROFILE

Alfa Kimya joined the "World of Textiles" in the year 1983. Young indeed; yet soon it captured the flag in the run for quality & trust, which, definitely is of prime concern in the textile sector's domestic and universal evaluation. Now, the name denotes a well known "Mark" that mark quality and creditability at all markets. Well known trade marks of the textile world prefer to use this company products for processing, dyeing and finishing works to get the best results in full confidence and reliance.

We are discriminative searchers for excellence in quality, economy and efficiency in our products. Further more, each and every challenging quest aiming "success" against the "tough" is admired by the executive team at Alfa Kimya Co.

We are persuaders of innovation, where ever it is; we follow up alterations, progress, developments that will carry us and our clients to better futures. Our laboratories will be willing to co-operate with our customers to meet their needs and specific demands to produce economic and repeatable formulas and solutions.

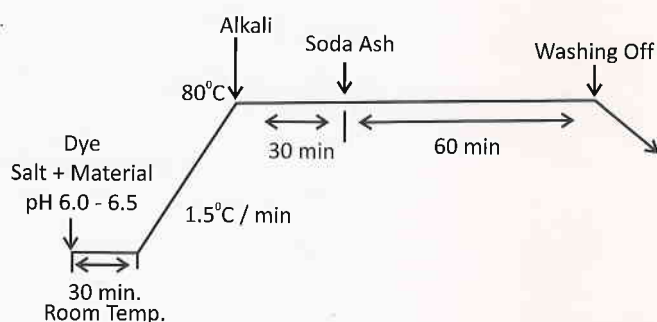
The basic factors of our production system is:

- ❖ Using synergetic materials
- ❖ Efficiency
- ❖ Reliability
- ❖ Ecological Product Planning
- ❖ High Quality & Consistancy
- ❖ Co-operation
- ❖ Research & Development of New products
- ❖ Communication
- ❖ Co-ordination

"HE" High Exhaust Dyes

"HE" i.e. BIS MONO CHLOROTRIAZIN Dyes are Reactive Dyes for cellulosic material & are designed to give high fixation by exhaust dyeing methods when applied at the temperature 85°C. HE dyes are suitable for dyeing cotton and other cellulosic materials. HE Dyes process significantly higher exhaustion & Fixation efficiency which result in appreciable cost reduction, in comparison to Conventional reactive dyes. Some advantage of HE Dyes have - Excellent compatibility, Good built up, Excellent Reproducibility, Wide Applicability & Outstanding built up and consistency.

Exhaust Dyeing



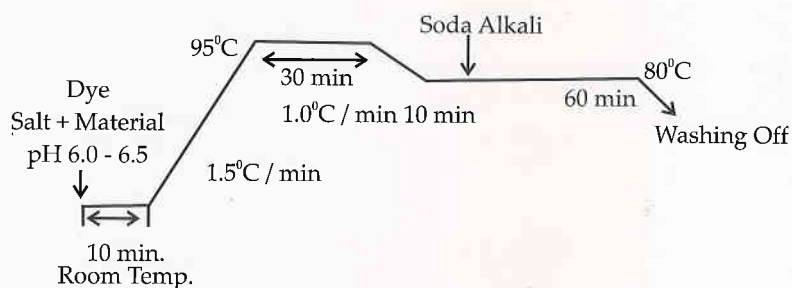
Cotton

Salt and Alkali Requirements

| % Dye | Common Salt (g/l) | Soda Ash (g/l) |
|---------|-------------------|----------------|
| <0.2 | 30 | 8 |
| 0.2-0.5 | 30-45 | 10 |
| 0.5-1.0 | 45-50 | 12 |
| 1.0-2.0 | 50-60 | 15 |
| 2.0-3.0 | 65-70 | 15-18 |
| 3.0-4.0 | 70-75 | 20 |
| >4.0 | 80 | 20 |

* Glauber's salt is recommended with Turquoise Blue

Viscose / Mercerised Cotton



Salt and Alkali Requirements

| % Dye | Common Salt (g/l) | Soda Ash (g/l) |
|-----------|-------------------|----------------|
| <0.2 | 30 | 8 |
| 0.2 - 0.5 | 30 - 40 | 10 |
| 0.5 - 1.0 | 40 - 50 | 12 |
| 1.0 - 2.0 | 50 - 60 | 15 |
| 2.0 - 3.0 | 60 - 65 | 18 |
| 3.0 - 4.0 | 60 - 70 | 20 |
| >4.0 | 70 - 75 | 20 |

* Glauber's salt is recommended with Turquoise Blue & Blue R (19)

Advantages

- Economical bis MCT dyes
- Wide range of products to cover broad shade gamut
- Good built-up behavior for deep shades
- Good wash fastness & good reproducibility
- Good reproducibility & leveling properties at 85°C
- Suitable post mercerized fastness

"ME" Bifunctional Dyes

"ME" (Medium Exhaust) i.e. BIFUNCTIONAL Dye are low temperature high exhaust Reactive Dyes suitable for Dyeing Padding and printing of all dyes of cellulosic material. These dyes offer high grade of all round fastness properties. They offer leveling properties and excellent alkalis stability. Fixation temperature of these dyes is 60°-45°C.

Exhaust Dyeing

| | | | | |
|--|-----------|--------|--------|-------------|
| Auxiliary Salt pH 6.0-6.5 Dye | Alkali | | | Washing off |
| | 60°C | | | |
| | 30 min | 15 min | 60 min | |
| | 1.5°C/min | | | |
| 30°C | 15 min | | | |

Single Alkali Method

Salt and Alkali Requirements

| %Dye | Common Salt (g/l) | Soda Ash (g/l) | NaoH (g/l) |
|-----------|-------------------|----------------|------------|
| <0.1 | 25 | 5 | — |
| 0.1 - 0.5 | 25 - 30 | 10 | — |
| 0.5 - 1.0 | 40 - 50 | 12 | — |
| 1.0 - 2.0 | 50 - 60 | 15 | — |
| 2.0 - 3.0 | 60 - 65 | 18 | — |
| 3.0 - 5.0 | 65 - 70 | 20 | 0.3 |
| 5.0 - 7.0 | 70 | 20 | 0.6 |
| > 7.0 | 80 | 20 | 1.0 |

Advantages

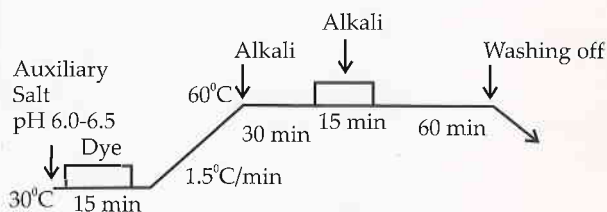
"ME" Dyes

- Commodity bifunctional dyes for economical shades
- Wide range of products to cover broad shade gamut
- Good built-up behaviour for deep shades
- Good wash fastness levels & good reproductibility

"VS" Vinyl Sulphone Base Dyes

"VS" (Vinyl Sulphone) DYES are B. SULPHATOETHYL SULPH ONE Reactive Dyes possessing Vinyl sulphone as the reactive group. In presence of alkali, these dyes chemically react with the hydroxyl group of cellulose and form firm, convalent linkages. These dyes are having very good features like, good solubility even in presence of alkali, very good fastness property & suitable for resist & discharge printing very much effectively. These dyes are applied by exhaust method at the optimum temperature of 60-65°C. Suitable for CBB & continuous dyeing.

Exhaust Dyeing



Single Alkali Method - 60°C

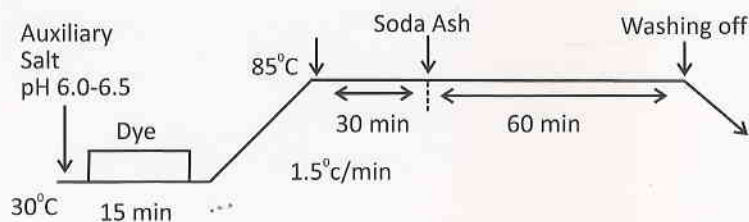
| %Dye | Common Salt (g/l) | Soda Ash (g/l) | NaoHgPL |
|-----------|-------------------|----------------|---------|
| <0.1 | 20 | 5 | - |
| 0.1 - 0.5 | 25 - 30 | 7 - 10 | - |
| 0.5 - 1.0 | 40 - 50 | 10 - 12 | - |
| 1.0 - 2.0 | 50 - 55 | 12 - 15 | - |
| 2.0 - 3.0 | 55 - 60 | 15 - 18 | - |
| 3.0 - 5.0 | 60 - 65 | 18 - 20 | 0.3 |
| 5.0 - 7.0 | 65 - 70 | 20 | 0.6 |
| > 7.0 | 80 | 20 | 1.0 |

Mixed Alkali Method with cold dyeing

Salt and Alkali Requirements

| %Dye | Common Salt (g/l) | Soda Ash (g/l) | Caustic Flakes (g/l) |
|-----------|-------------------|----------------|----------------------|
| <0.1 | 20 | 5 | -- |
| 0.1 - 0.5 | 20 - 25 | 8 | -- |
| 0.5 - 1.0 | 25 - 40 | 8 | 0.5 - 0.8 |
| 1.0 - 2.0 | 40 - 50 | 10 | 0.8 - 1.0 |
| 2.0 - 3.0 | 50 - 60 | 12 | 1.0 - 1.5 |
| 3.0 - 5.0 | 60 - 80 | 15 | 1.5 - 2.0 |
| 5.0 - 7.0 | 80 - 90 | 20 | 2.0 - 2.5 |
| > 7.0 | 100 | 20 | 2.5 - 3.0 |

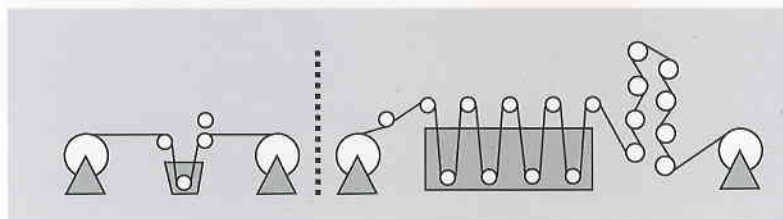
Turquoise Dyeing Method



Salt and Alkali Requirements

| % Dye | Glaubers Salt (g/l) | Soda Ash (g/l) |
|-----------|---------------------|----------------|
| <0.1 | 20 | 5 |
| 0.1 - 0.5 | 25 - 30 | 8 |
| 0.5 - 1.0 | 30 - 40 | 10 |
| 1.0 - 2.0 | 40 - 50 | 12 - 15 |
| 2.0 - 3.0 | 50 - 60 | 15 - 18 |
| 3.0 - 5.0 | 60 - 65 | 20 |
| 5.0 - 7.0 | 65 - 70 | 20 |
| >7.0 | 85 | 20 |

Cold Pad Batch Dyeing



Mixing pump required

Add 10 - 100 g/l Urea to dye liquor (necessary for solubility)

Silicate Method

| Dye (g/l) | Sodium Silicate (38° Be) | Caustic Flakes (g/l) |
|-----------|--------------------------|----------------------|
| <5 | 100 ml/l | 2 |
| 10 - 20 | 100 ml/l | 3 - 3.5 |
| 20 - 30 | 100 ml/l | 3.5 - 4.0 |
| 30 - 40 | 100 ml/l | 4.0 - 4.5 |
| 40 - 60 | 100 ml/l | 4.5 - 5.0 |
| 60 - 80 | 100 ml/l | 5 - 6 |
| 80 - 100 | 100 ml/l | 6 - 8 |

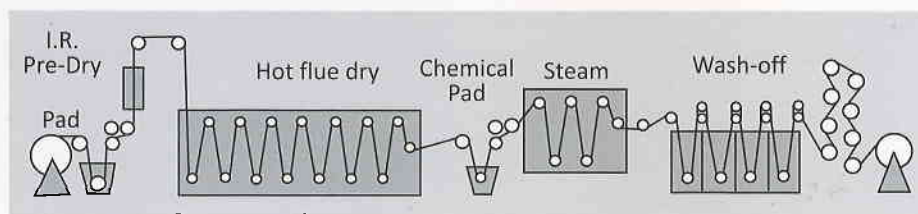
Batch 16 hrs at RT.

Silicate Free Method

| Dye (g/l) | Soda as (g/l) | Silicate (g/l) |
|-----------|---------------|----------------|
| 10 | 10 | 6 |
| 20 | 12 | 8 |
| 20 - 30 | 15 | 10 |
| 30 - 40 | 18 | 12 |
| 40 - 60 | 20 | 15 |
| 60 - 80 | 20 | 20 |

Batch 24 hrs at 25°C

Pad-Dry-Chemical Pad-Steam Method



Pad : dye, wetting agent, anti - migrant, mild oxidant,
IR Per-dry, dry : 110 - 130°C, Chemical Pad

Advantages

"VS" Dyes

- Economical multi use product range
- Broad selection available from wide shade range
- Range of products suitable for Discharge ground
- Good fastness properties

REACTIVE 'RGB' DYES

The new Dyestuffs development to utilize low cost dyeing at 60°C dyeing temperature,

RGB Dyes in the Exhaust Method

- * Very Good reproducibility
- * Very good built-up, even in deep shades
- * Good washing - off properties
- * Uniform fixation
- * Excellent cost efficiency
- * Suitable for pestal & medium shade as well as for C.P.B. & continues dyeing

REACTIVE 'RR' / 'LF' DYES

RR is a new range of 4 dyes suitable for 60°C exhaust dyes and CPB continuous dyeing for pastel light & medium shade. These 4 new dyes show a uniform level dyeing performance. These dyes are mainly used in the exhaust dyeing process at 60°C.

- * Suitable for Pastal light medium shades.
- * Very good build up in deep shades too.
- * Good washing off properties
- * All round balanced fastness level & good fastness properties.
- * Uniform exhaustion and fixation as well as level-dyeing.
- * Very good reproducibility.
- * Three basic component for trichromatic combination.
- * Cost effective dyes.

REACTIVE 'XLPD' / 'MDRN' DYES

REACTIVE XLPD dyes are the latest generation of bi-mono-chlorotriazine reactive dyes which have excellent reproducibility and level dyeing properties. The molecular structure of the individual products in the range has been engineered to help the modern dye houses in going one step closer to the concept of right-first-time production. This range of dyes along with REACTIVE HE dyes provides a complete range for meeting all the requirements of a modern dyer i.e. a complete shade gamut, a choice of dyestuffs for excellent level dyeing and reproducibility, very good build-up behaviour, and fastness properties to meet international standards.

Reactive XLPD dyes offer

- * Excellent reproducibility of shade even with lab to bulk in application conditions.
- * Excellent level dyeing performance
- * Economy and excellent build-up in exhaust dyeing.
- * Good wash-off properties leading to high wet fastness ratings.
- * High fixation value hence low load on E.T.P.

REACTIVE 'SBG' Dyes

ED Dyes (Easy Dyes) are considered as a cost effective alternatives for textile dyes. These dyes contain no expensive chemicals. These types of dyes are specially formulated for dark shades.

Features :

- * Suitable for high exhaustion dyeing
- * Functional for dark shades
- * Good leveling and fastness properties
- * Excellent reproducibility - Lab to bulk
- * Low effluent load as it contains less chemicals
- * High fixation efficiency with high fastness properties

"P" & "H" Printing Dyes

"P & H" are PRINTING Dye Which are meant for Printing on Cellulose Textiles by both Dyeing as well as Printing Methods. These Dyes are MONO CHLOROTRIAZINE reactive dyes having a low reactivity and low substantivity, Since these dyes have low reactivity, they require more severe conditions for fixation with cellulosic materials. "P & H" Series dyes react with cellulosic fiber in the presence of alkali and under the influence of heat. They are readily soluble by pouring water of 80-85°C on powder and stirring well. The dyes contains very good fastness properties and suitable for printing cotton, viscose, cuprammonium rayons and natural silk.

Printing Processes

Print - Silicate

| Dye | X parts |
|----------------------------|----------|
| Urea | 50 - 100 |
| Water | Y parts |
| Sodium Alginate Paste (6%) | 60 |
| Stock | 1000 |

Print - Dry - Pad Silicate (95° - 100° TW)
Batch 16 hrs

Print - Dry - Steam / Print - Dry - Bake

| Substrate Cotton | Viscose | |
|----------------------------|----------|-----------|
| Dye | X parts | X parts |
| Urea | 50 - 100 | 100 - 200 |
| Water | Y parts | Y parts |
| Sodium Alginate Paste (6%) | 60 | 60 |
| Resist Salt | 10 | 10 |
| Sodium bicarbonate | 10 - 30 | 10 - 30 |
| Resist Salt | 5 - 10 | 5 - 10 |
| Stock | 1000 | 1000 |

Bicarbonate & Urea requirement

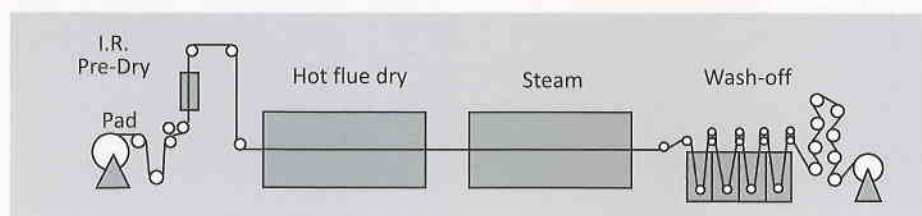
| Dye (g / kg) | | 1 - 10 | 11 - 30 | 31 - 40 | >40 |
|-----------------------------|----|--------|---------|---------|-----|
| Sodium Bicarbonate (g / kg) | | 10 | 15 | 25 | 30 |
| Urea (g / kg) | CO | 50 | 70 | 80 | 100 |
| | CV | 100 | 140 | 170 | 200 |

Print - Dry - Steam for 7 to 10 min at 102° - 100°C

or

Print - Dry - Bake 1 - 5 min at 200° - 150°C (Process not suitable for Viscose)

Pad - Dry - Steam (Cotton & Viscose)

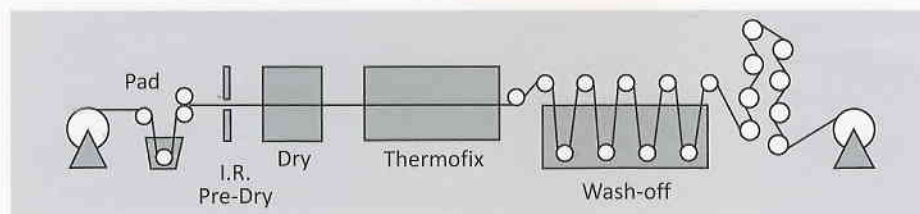


Mixing pump required : Pad : dye, wetting agent, anti - migrant, mild oxidant, alkali
Add Urea to improve solubility.

| Dye (g / l) | Soda Ash (g/l) |
|-------------|----------------|
| < 20 | 10 |
| >20 | 20 |

IR Pre-dry, Dry : 100-120°C, Steam : 2 mins at 102°C

Pad - Dry - Thermofix (Cotton)



Mixing pump required : Pad : dye, wetting agent, anti - migrant, mild oxidant, alkali.

| Dye (g / l) | Soda Ash (g/l) | Urea (g/l) |
|-------------|----------------|------------|
| < 20 | 10 | 100 |
| 20-50 | 15 | 150 |
| > 50 | 20 | 200 |

IR Pre-dry, Dry : 118 - 138°C
Thermofix : 3 mins. - 11 min - 135 - 160°C

Advantages

- Monochlorotrizine dyes having low substantivity.
- High performance dyes suitable for different processes.
- Wide range of shades for broad shade gamut.
- Good build up & reproducibility
- Good wash fastness levels
- Resistant to oxidative bleach damage

Key to Abbreviations

| | | |
|----|---|---------------|
| G | = | Good |
| F | = | Fair |
| P | = | Poor |
| S | = | Suitable |
| NS | = | Non Suitable |
| LS | = | Less Suitable |

(The information contained in this **SHADE CARD** has been provided in good faith and to the best of our knowledge but **WITHOUT WARRANTY**. Consumers are requested to test the products as to their suitability for any application, use or processing.)

| 1% | 4% | 'HE' DYES PRODUCT NAME (C.I. No.) 80°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespi- ration | | Washing Fastness | | Post Merserizing Fastness | |
|--|---|--|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|-------------------|-------------|------------------|----------|------------------------------|----------|
| | | | Solubility gpl | | | X-12 | | | | E04 | ISO-105 C03 | Shade Change | Staining | Shade Change | Staining |
| | | | Plane | With salt | | Dry | Wet | | | | | | | | |
|  |  | SUPERFIX YELLOW HE-6G (Yellow 135) | 80 | 65 | H | 5 | 4-5 | 5 | 4 | 4-5 | 4-5 | 4-5 | 4-5 | 4-5 | 4-5 |
|  |  | SUPERFIX YELLOW HE-4G (Yellow 81) | 90 | 80 | H | 5 | 4-5 | 5 | 4 | 4-5 | 4-5 | 4-5 | 4 | 4-5 | 4-5 |
|  |  | SUPERFIX YELLOW HE-4R (Yellow 84) | 100 | 90 | H | 4-5 | 4-5 | 4-5 | 3-4 | 4 | 4 | 4-5 | 4 | 4-5 | 4 |
|  |  | SUPERFIX ORANGE HER (Orange 84) | 65 | 50 | H | 4-5 | 4 | 4-5 | 4 | 4 | 3-4 | 4-5 | 4 | 4-5 | 4 |
|  |  | SUPERFIX RED HE-3B (Red 120) | 80 | 65 | H | 4-5 | 4 | 4-5 | 3 | 4 | 3-4 | 4-5 | 4 | 4-5 | 4 |
|  |  | SUPERFIX RED HE-7B (Red 141) | 80 | 65 | H | 4-5 | 4 | 4 | 3 | 3-4 | 3-4 | 4-5 | 4 | 4 | 4 |
|  |  | SUPERFIX BLUE HERD CONC. (Blue 160) | 65 | 50 | H | 5 | 4-5 | 4-5 | 4 | 3-4 | 4 | 4-5 | 4 | 4 | 4 |
|  |  | SUPERFIX BLUE HE-GN (Blue 198) | 70 | 60 | H | 5 | 4-5 | 4-5 | 3-4 | 3 | 3-4 | 4-5 | 4 | 4-5 | 4 |
|  |  | SUPERFIX NAVY BLUE HE-R (Blue 171) | 80 | 65 | H | 4-5 | 4 | 4 | 3-4 | 3 | 3-4 | 4 | 4 | 4 | 4 |




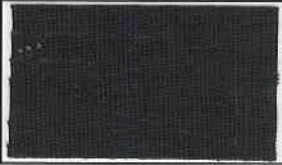









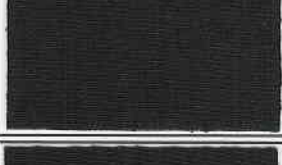






| 1% | 4% | "ME" BI-FUNCTIONAL DYES PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespiration | | Washing Fastness | | Suitability | | |
|---|---|---|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|--------------|----------------|------------------|----------|-------------|------|--------|
| | | | Solubility gpl | | | X-12 | | | | E04 | ISO-105 CO3 | CPB | Printing | Discharge | | |
| | | | Plane | With salt | | Dry | Wet | | | | | | | | Acid | Alkali |
|  |  | SUPERFIX YELLOW 4GL (Yellow 160) | 120 | 100 | H | 4-5 | 4-5 | 5 | 4 | 4 | 4-5 | 4-5 | 4-5 | S | S | G |
|  |  | SUPERFIX YELLOW 3RF (Yellow 145) | 110 | 90 | M | 4-5 | 4 | 4-5 | 3-4 | 4 | 4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX YELLOW 3RF 200% (Yellow 145) | 110 | 90 | M | 4-5 | 4 | 4-5 | 3 | 4 | 3-4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX ORANGE 2RL (Orange 122) | 80 | 60 | M | 4 | 3-4 | 4 | 3 | 3 | 3-4 | 4 | 4 | -- | -- | P |
|  |  | SUPERFIX RED 3BF (Red 195) | 100 | 90 | M | 4-5 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | -- | S | P |
|  |  | SUPERFIX RED 3BF 200% (Red 195) | 100 | 90 | M | 4-5 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | -- | S | P |
|  |  | SUPERFIX BLUE BRF (Blue 221) | 70 | 60 | M | 4-5 | 4 | 4-5 | 3 | 3 | 3-4 | 4-5 | 4-5 | -- | -- | P |
|  |  | SUPERFIX NAVY BLUE BF (Blue 222) | 70 | 60 | M | 4-5 | 4 | 4 | 3 | 3 | 3-4 | 4 | 4 | S | S | F |
|  |  | SUPERFIX NAVY BLUE SKF (Blue 222) | 70 | 60 | M | 4-5 | 4 | 4 | 3 | 3 | 3-4 | 4-5 | 4-5 | S | S | F |










| 1% | 4% | VINYL SULPHONE (Based Dyes) PRODUCT NAME (C.I. No.) 80°C & PRINT | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Pre-spi-ration | | Washing Fastness | | Suitability | | |
|--|---|---|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|----------------|-------------|------------------|----------|-------------|--------------|----------|
| | | | Solubility g/l | | | X-12 | | | | E04 | ISO-105 C03 | CPB | Printing | Discharge | | |
| | | | Plane | With salt | | Dry | Wet | | | | | | | | Shade Change | Staining |
|  |  | SUPERFIX YELLOW GL (Yellow 37) | 100 | 90 | M | 5 | 5 | 5 | 4-5 | 4 | 4 | 5 | 4-5 | S | S | G |
|  |  | SUPERFIX YELLOW GR (Yellow 15) | 110 | 80 | M | 5 | 4-5 | 4-5 | 4 | 4 | 4 | 4-5 | 4-5 | S | S | G |
|  |  | SUPERFIX GOL. YELLOW RNL (Orange 107) | 110 | 90 | M | 5 | 4-5 | 4-5 | 3-4 | 4 | 3 | 4-5 | 4-5 | S | S | G |
|  |  | SUPERFIX B. ORANGE 3R (Orange 16) | 80 | 60 | M | 4-5 | 4 | 4-5 | 4 | 4 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX RED BB (Red 21) | 100 | 80 | M | 4-5 | 4 | 4-5 | 4 | 4 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX SCARLET 2GX (Red 222) | 90 | 65 | M | 5 | 4-5 | 4-5 | 4 | 4 | 4-5 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX RED RB (Red 198) | 100 | 75 | M | 4-5 | 4 | 4 | 3-4 | 4 | 4 | 4-5 | 4-5 | S | S | F |
|  |  | SUPERFIX RED 3GX (Red 223) | 90 | 75 | M | 4-5 | 4-5 | 4-5 | 3-4 | 4 | 4 | 4-5 | 4-5 | S | S | G |
|  |  | SUPERFIX VIOLET 5R (Violet 5) | 100 | 90 | M | 4-5 | 4 | 4 | 3-4 | 4 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX T. BLUE G (Blue 21) | 65 | 55 | M | 4 | 3-4 | 4 | 3 | 3-4 | 3-4 | 3-4 | 3-4 | S | S | P |

| 1% | 4% | VINYL SULPHONE (Based Dyes) PRODUCT NAME (C.I. No.) 80°C & PRINT | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespiration | | Washing Fastness | | Suitability | | |
|---|---|---|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|--------------|--------|------------------|----------|-------------|----------|-----------|
| | | | Solubility g/l | | | X-12 | | | | E04 | | ISO 105 C03 | | CPB | Printing | Discharge |
| | | | Plane | With salt | | Dry | Wet | | | Acid | Alkali | Shade Change | Staining | | | |
|  |  | SUPERFIX BLUE KNR (Blue 19) | 70 | 45 | H | 5 | 4-5 | 4-5 | 3-4 | 4 | 4 | 4-5 | 4-5 | S | S | P |
|  |  | SUPERFIX BLUE R SP (Blue 19) | 80 | 65 | H | 5 | 4-5 | 4-5 | 3-4 | 4 | 4 | 4-5 | 4-5 | S | S | P |
|  |  | SUPERFIX BLUE BB (Blue 220) | 75 | 65 | M | 4-5 | 4 | 4-5 | 3 | 3-4 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX BLACK RL (Black 31) | 100 | 75 | H | 4-5 | 4 | 4-5 | 3-4 | 4 | 3-4 | 4-5 | 4 | S | S | G |
| 0.5% | 2% | 'RR' SERIES PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespiration | | Washing Fastness | | Suitability | | |
| | | | Solubility g/l | | | X-12 | | | | E04 | | ISO 105 C03 | | CPB | Printing | Discharge |
| | | | Plane | With salt | | Dry | Wet | | | Acid | Alkali | Shade Change | Staining | | | |
|  |  | SUPERFIX YELLOW RR | 110 | 90 | M | 4-5 | 4 | 4-5 | 3 | 2 | 3 | 4-5 | 4-5 | S | S | G |
|  |  | SUPERFIX ORANGE RR | 90 | 80 | M | 4-5 | 4 | 4-5 | 4 | 3-4 | 3 | 4-5 | 4-5 | S | S | F |
|  |  | SUPERFIX RED RR | 100 | 90 | M | 4-5 | 4 | 4 | 3-4 | 3-4 | 4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX BLUE RR | 90 | 70 | M | 4-5 | 4 | 4 | 3-4 | 4-5 | 4 | 4-5 | 4 | S | S | G |

| 1% | 3% | 'RGB' SERIES PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespi-ration | | Washing Fastness | | Suitability | | |
|--|---|---|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|---------------|-------------|------------------|----------|-------------|---|---|
| | | | Solubility gpl | | | X-12 | | | | ED4 | ISO-105 C03 | CPB | Printing | Discharge | | |
| | | | Plane | With salt | | Dry | Wet | | | | | | | | | |
|  |  | SUPERFIX ULTRA YELLOW RGB | 110 | 90 | M | 4-5 | 4 | 4-5 | 3 | 2 | 3-4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX ULTRA RED RGB | 100 | 80 | M | 4-5 | 4 | 4 | 3 | 3 | 3 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX ULTRA CARAMINE RGB | 100 | 80 | H | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 3-4 | S | S | G |
|  |  | SUPERFIX BLUE RGB | 90 | 70 | M | 4-5 | 4 | 4-5 | 3-4 | 3 | 3 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX NAVY BLUE RGB (Red 250) | 90 | 70 | M | 4-5 | 4 | 4 | 3-4 | 3-4 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX NAVY GDG | 90 | 70 | M | 4-5 | 4 | 4 | 3-4 | 3-4 | 3 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX NAVY WRG | 100 | 80 | M | 4-5 | 4 | 4 | 3 | 3 | 3 | 4-5 | 4 | S | S | G |
|  |  | | | | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | | | | |

| 1% | 4% | 'SGB' SERIES PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespi-ration | | Washing Fastness | | Suitability | | |
|---|---|---|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|---------------|-------------|------------------|----------|-------------|---|---|
| | | | Solubility gpl | | | X-12 | | | | E04 | ISO-105 C03 | CPB | Printing | Discharge | | |
| | | | Plane | With salt | | Dry | Wet | | | | | | | | | |
| | | | | | | | | | | Acid | Alkali | Shade Change | Staining | | | |
|  |  | SUPERFIX YELLOW SGB (Yellow Mix) | 110 | 90 | H | 4-5 | 4 | 4-5 | 4 | 2 | 3-4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX ORANGE S3R (Orange Mix) | 90 | 65 | H | 4-5 | 4 | 4 | 3-4 | 3 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX RED SGB (Red Mix) | 100 | 70 | H | 4-5 | 4 | 4 | 3-4 | 3 | 3-4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX RED SBS-S (Red Mix) | 100 | 75 | H | 4 | 4 | 4 | 3-4 | 4 | 4 | 4 | 4 | S | S | G |
|  |  | SUPERFIX RED SGB-3B (Red Mix) | 110 | 80 | H | 4 | 4 | 4 | 4 | 4 | 3-4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX RED SGB-4B (Red Mix) | 100 | 80 | H | 4-5 | 4 | 4 | 4 | 4 | 3-4 | 4 | 4 | S | S | F |
|  |  | SUPERFIX BLUE SGB (Blue Mix) | 100 | 70 | H | 4-5 | 4 | 4-5 | 4 | 4 | 4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX NAVY SGB (Navy Mix) | 120 | 100 | H | 4-5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | S | S | G |
|  |  | SUPERFIX RED BROWN MD (Red Brown Mix) | 90 | 70 | H | 4 | 4 | 4 | 3-4 | 3-4 | 3-4 | 4 | 3-4 | S | S | F |

| 2% | 5% | BLACK MIX DYES PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespi-ration | | Washing Fastness | | Suitability | | |
|--|---|---|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|---------------|-------------|------------------|--------------------|-------------|--------|--------------|
| | | | Solubility g/l | | | X-12 | | | | E04 | ISO-105 C03 | CPB | Printing Discharge | | | |
| | | | Plane | With salt | | Dry | Wet | | | | | | | Acid | Alkali | Shade Change |
|  |  | SUPERFIX BLACK B 150% | 120 | 100 | M | 4-5 | 4 | 4 | 3-4 | 3 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX BLACK NBG (Black Mix) | 100 | 90 | H | 4-5 | 4 | 3-4 | 3 | 3-4 | 3 | 4 | 3-4 | S | S | G |
|  |  | SUPERFIX BLACK NNR (Black Mix) | 100 | 90 | H | 4-5 | 4 | 3-4 | 3-4 | 3-4 | 3 | 4 | 3-4 | S | S | G |
|  |  | SUPERFIX BLACK WM (Black Mix) | 100 | 90 | M | 4 | 3-4 | 3-4 | 3-4 | 3-4 | 3 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX BLACK DN Conc. (Black Mix) | 110 | 100 | H | 4 | 3-4 | 4 | 3-4 | 3 | 3 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX JET BLACK R (Black Mix) | 120 | 100 | H | 4 | 4 | 4 | 3 | 3 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX BLACK ULTRA Conc. (Black Mix) | 120 | 100 | M | 4 | 3-4 | 3-4 | 3 | 3-4 | 3-4 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX BLACK MDG (Black Mix) | 100 | 90 | M | 4 | 3-4 | 4 | 3 | 3 | 3 | 4-5 | 4 | S | S | G |
|  |  | SUPERFIX BLACK SNG (Black Mix) | 110 | 90 | M | 4-5 | 4 | 4 | 3-4 | 3-4 | 3 | 4 | 4 | S | S | G |
|  |  | SUPERFIX BLACK GX (Black Mix) | 110 | 90 | H | 4-5 | 4 | 3-4 | 3 | 3-4 | 3 | 4-5 | 4 | S | S | G |

| 2% | PRINTING DYES “H”&“P” Series PRODUCT NAME (C.I. No.) | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespi- ration | | Washing Fastness | | Suitability | | |
|---|--|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|-------------------|--------|---------------------|----------|-------------|----------|-----------|
| | | Solubility gpl | | | X-12 | | | | E04 | | ISO-105 C03 | | CPB | Printing | Discharge |
| | | Plane | With salt | | Dry | Wet | | | Acid | Alkali | Shade Change | Staining | | | |
| | | | | | | | | | | | | | | | |
|  | SUPERFIX YELLOW H4G (Yellow 18) | 70 | 65 | H | 5 | 4-5 | 5 | 4 | 4-5 | 4-5 | 4-5 | 4-5 | S | S | G |
|  | SUPERFIX GOLDEN YELLOW P3R (Orange 12) | 80 | 70 | H | 4-5 | 4 | 4-5 | 3-4 | 4 | 4 | 4-5 | 4 | S | S | G |
|  | SUPERFIX ORANGE P2R (Orange 13) | 65 | 55 | H | 4-5 | 4 | 4-5 | 3-4 | 4 | 4 | 4-5 | 4 | S | S | G |
|  | SUPERFIX ORANGE P4R (Orange 35) | 60 | 50 | H | 4-5 | 4 | 4 | 3-4 | 3-4 | 3-4 | 4-5 | 4 | S | S | G |
|  | SUPERFIX RED P2B (Red 45) | 80 | 65 | H | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3-4 | S | S | G |
|  | SUPERFIX RED PB (Red 24) | 90 | 65 | H | 4 | 4 | 4 | 3-4 | 3-4 | 3-4 | 4 | 4 | S | S | G |
|  | SUPERFIX RED P8B (Red 31) | 60 | 55 | H | 4 | 3-4 | 3-4 | 3-4 | 3-4 | 3-4 | 4 | 3-4 | S | S | G |
|  | SUPERFIX RED P6B (Red 218) | 70 | 65 | H | 4 | 3-4 | 4 | 3-4 | 3-4 | 3-4 | 4 | 3-4 | S | S | F |
|  | SUPERFIX RED P5B (Red 245) | 70 | 65 | H | 4 | 3-4 | 3-4 | 4 | 3-4 | 3-4 | 3-4 | 3-4 | S | S | G |

| 2% | PRINTING DYES "H"&"P" Series PRODUCT NAME (C.I. No.) | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespi- ration | | Washing Fastness | | Suitability | | |
|----|--|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|-------------------|--------|---------------------|----------|-------------|----------|-----------|
| | | Solubility gpl | | | X-12 | | | | E04 | | ISO-105 C03 | | CPB | Printing | Discharge |
| | | Plane | With salt | | Dry | Wet | | | Acid | Alkali | Shade Change | Staining | | | |
| | | | | | | | | | | | | | | | |
| | SUPERFIX T. BLUE PGR (Blue 72) | 60 | 50 | H | 4 | 3-4 | 2 | 1 | 2 | 2-3 | 4 | 3-4 | S | S | P |
| | SUPERFIX BLUE 5RH (Blue 13) | 70 | 55 | H | 4-5 | 4 | 2 | 2 | 3 | 3-4 | 4 | 4 | S | S | P |
| | SUPERFIX B. BLUE P3R (Blue 49) | 70 | 60 | H | 4-5 | 4-5 | 1-2 | 2 | 4 | 3-4 | 4 | 4 | S | S | P |
| | SUPERFIX T. BLUE H5G (Blue 25) | 60 | 45 | H | 4 | 3-4 | 1-2 | 1 | 1-2 | 2 | 3-4 | 3-4 | S | S | P |
| | SUPERFIX NAVY BLUE P2R (Blue 59) | 80 | 65 | H | 4 | 4 | 2 | 2-4 | 3 | 2-3 | 4 | 3-4 | S | S | F |
| | SUPERFIX BLACK HN (PN) (Black 8) | 80 | 60 | H | 4-5 | 4 | 2 | 2-4 | 3 | 2-3 | 4 | 3-4 | S | S | G |
| | SUPERFIX BLACK PGR (Black 39) | 70 | 65 | H | 4 | 3-4 | 3 | 3 | 3 | 3-4 | 4 | 3-4 | S | S | G |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |



| 1% | 4% | MDRN SERIES For HIGH FASTNESS PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespi-ration | | Washing Fastness | | Suitability | |
|---|---|---|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|---------------|--------|------------------|----------|-------------|--------------------|
| | | | Solubility gpl | | | X-12 | | | | E04 | | ISO-105 CO3 | | CPB | Printing Discharge |
| | | | Plane | With salt | | Dry | Wet | | | Acid | Alkali | Shade Change | Staining | | |
| | | | | | | | | | | | | | | | |
|  |  | SUPERFIX YELLOW MDRN *** | 110 | 90 | M | 4-5 | 4 | 4-5 | 2 | 2 | 3-4 | 4-5 | 4 | S | S G |
|  |  | SUPERFIX RED MDRN *** | 100 | 85 | M | 4-5 | 4 | 4 | 3-4 | 3 | 3-4 | 4-5 | 4 | S | S F |
|  |  | SUPERFIX BLUE MDRN *** | 90 | 85 | M | 4-5 | 4 | 4 | 3-4 | 3 | 3-4 | 4-5 | 4 | S | S G |
| 1% | 4% | HF SERIOUS FOR HIGH FASTNESS PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1997 | Prespi-ration | | Washing Fastness | | Suitability | |
| | | | Solubility gpl | | | X-12 | | | | E04 | | ISO-105 CO3 | | CPB | Printing Discharge |
| | | | Plane | With salt | | Dry | Wet | | | Acid | Alkali | Shade Change | Staining | | |
| | | | | | | | | | | | | | | | |
|  |  | SUPERFIX G. YELLOW LF H/C *** | 100 | 90 | M | 4-5 | 4 | 4 | 3 | 3 | 3-4 | 4-5 | 4 | S | S G |
|  |  | SUPERFIX SCARLET LF *** | 80 | 70 | M | 4-5 | 4 | 4 | 4 | 3 | 4 | 4-5 | 4 | S | S G |
|  |  | SUPERFIX ROYAL BLUE LF *** | 70 | 65 | M | 4-5 | 4-5 | 4 | 3-4 | 3 | 3-4 | 4-5 | 4 | S | S P |
|  |  | | | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | | | |

| 1% | 4% | XLDP SERIES PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1987 | Pre-spiration | | Washing Fastness | | Suitability | | |
|--|---|--|--------------------|-----------|------------|------------------|-----|-----------------------------------|---------------------------------------|---------------|--------|------------------|----------|-------------|----------|-----------|
| | | | Solubility gpl | | | X-12 | | | | E04 | | ISO-105 C03 | | | | |
| | | | Plane | With salt | | Dry | Wet | | | Acid | Alkali | Shade Change | Staining | CPB | Printing | Discharge |
|  |  | SUPERFIX RED MBXL-3B *** | 110 | 90 | H | 4-5 | 4 | 4 | 3 | 3 | 4 | 4-5 | 4 | S | S | P |
|  |  | SUPERFIX SCARLET XLDP *** | 90 | 80 | H | 4-5 | 4 | 4-5 | 3-4 | 3-4 | 3-4 | 4-5 | 4 | S | S | P |
|  |  | SUPERFIX BLUE XLDP *** | 100 | 80 | H | 4-5 | 4 | 4 | 4 | 4-5 | 4 | 4-5 | 4-5 | S | S | G |
|  |  | SUPERFIX NAVY BLUE MDXL *** | 90 | 75 | H | 4-5 | 4 | 4 | 3-4 | 4 | 4 | 4 | 4 | S | S | F |
| 1% | 4% | SPECIALITY PRODUCTS PRODUCT NAME (C.I. No.) 60°C | General Properties | | Reactivity | Rubbing Fastness | | Light Fastness AATCC - 16E AFU | Pool water Fast AATCC - 162 - 1987 | Pre-spiration | | Washing Fastness | | Suitability | | |
| | | | Solubility gpl | | | X-12 | | | | E04 | | ISO-105 C03 | | | | |
| | | | Plane | With salt | | Dry | Wet | | | Acid | Alkali | Shade Change | Staining | CPB | Printing | Discharge |
|  |  | SUPERFIX LEMON SF3G *** | 100 | 90 | H | 5 | 4-5 | 4-5 | 3-4 | 4 | 4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX RED S2B *** | 120 | 100 | H | 4-5 | 4 | 4 | 3-4 | 4-5 | 4 | 4 | 4 | S | S | F |
|  |  | SUPERFIX RED SF2BL *** | 100 | 90 | H | 5 | 4-5 | 4-5 | 3 | 4-5 | 4 | 4-5 | 4 | S | S | F |
|  |  | SUPERFIX DARK RED SFD *** | 100 | 90 | H | 4-5 | 4 | 4 | 3-4 | 4-5 | 4 | 4 | 4 | S | S | F |
|  |  | SUPERFIX BLUE SFG *** | 80 | 65 | H | 5 | 4-5 | 4-5 | 2 | 2 | 3-4 | 4-5 | 4 | S | S | P |