


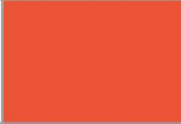







True bi-functional dyes with high build-up and excellent compatibility

| Sumifix Supra E-XF | | %owf | Application |
|-------------------------|---|------|--|
| Lemon Yellow E-XF gran. |  | 2.0 | Brilliant lemon yellow dye for vivid shades, in case of bright greens: to be used in combination with Sumireact Turquoise Blue G Conc. |
| Yellow E-XF gran. |  | 2.0 | Yellow dye for standard trichromatic combinations: pale to deep shades. Light fast and dischargeable |
| Yellow-Brown E-XF gran. |  | 2.0 | Special yellow, offering higher light fastness, showing a compatible build-up in combination with Rubine, Bordeaux, Blue and Deep Blue E-XF. |
| Scarlet E-XF gran. |  | 2.0 | Dye recommended for Marlboro red and scarlet shades |
| Red E-XF gran. |  | 2.0 | Red dye for standard trichromatic combinations: pale to medium shades. Also recommended for all red and orange shades |
| Rubine E-XF gran. |  | 2.0 | Red dye for medium and deep, compatible build-up with Yellow, Yellow-Brown, Blue and Deep Blue E-XF. |
| Bordeaux E-XF gran. |  | 2.0 | High build-up bluish red for pale to deep shades. Especially recommended for difficult to dye fibres, such as viscose, in combination with Yellow and Deep Blue E-XF |
| Blue E-XF gran. |  | 2.0 | Blue dye for standard trichromatic combinations: pale to medium shades |
| Deep Blue E-XF gran. |  | 2.0 | High build-up blue dye suited for pale to deep shades. Especially recommended for difficult to dye fibres, such as viscose, in combination with Yellow and Bordeaux E-XF |

| Properties | | Lemon Yellow E-XF | Yellow E-XF | Yellow-Brown E-XF | Scarlet E-XF | Red E-XF | Rubine E-XF | Bordeaux E-XF | Blue E-XF | Deep Blue E-XF | |
|---------------------------------------|--|----------------------------------|-------------|-------------------|--------------|------------|-------------|---------------|-----------|----------------|------|
| | | Swatches dyeing depth (% o.w.f.) | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Fastness properties | Chlorinated water (20ppm) | | 4 | 3-4 | 4 | 4 | 4 | 3-4 | 5 | 3 | 4 |
| | Perspiration contact | Staining on cotton | 5 | 4 | 4 | 5 | 4 | 4-5 | 5 | 5 | 4-5 |
| | | | 5 | 4 | 4 | 5 | 4 | 4-5 | 5 | 5 | 4 |
| | Washing 60°C | Staining on cotton | 5 | 4-5 | 4 | 4 | 4-5 | 4-5 | 4-5 | 5 | 4-5 |
| | | | 5 | 5 | 5 | 4-5 | 4-5 | 4-5 | 5 | 5 | 4-5 |
| | Perspiration light | Alkaline | 4-5 | 4 | 4-5 | 3-4 | 3 | 4 | 4 | 4 | 3-4 |
| | | Acid | 4-5 | 4 | 5 | 4-5 | 3 | 4 | 4 | 4-5 | 3-4 |
| | Light | | 4-5 | 5< | 5< | 4-5 | 5 | 5 | 4 | 5< | 5 |
| Dyeing properties | Dischargeability | | + | + | + | (+) | - | (+) | (+) | - | + |
| | Migration properties | | + | + | + | + | + | + | + | + | + |
| | Optimum Exhaust dyeing temp. (°C) | | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Applicability | Printing | | - (+) | (+) + | - - | - - | (+) + | (+) (+) | - (+) | + | + |
| | Continuous dyeing | | - (+) | (+) + | (+) (+) | (+) (+) | (+) + | (+) (+) | - (+) | + | + |
| | Cold Pad Batch dyeing | | - | + | + | + | + | + | (+) | + | + |
| | Exhaust dyeing | | + | + | + | + | + | + | + | + | + |
| Solubility | Salt (Na ₂ SO ₄ = 30g/l) | | 20 | 100< | 100 | 20< | 100< | 100 | 20< | 100< | 100 |
| | Water, 25°C (g/l) | | 100< | 150< | 100< | 100< | 150< | 150< | 100< | 150< | 100< |
| Arylamine free fabric dyeings (<5ppm) | | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 0 | 0 |

Legend for the table

Quotation of applicability

- + : Suitable
- (+) : Limited suitability
- : Unsuitable

Continuous dyeing

- Upper : One bath pad-dry steam
- Lower : Two bath pad-dry steam

Printing

- Upper : One phase process
- Lower : Two phase process

Fastness

- Light : ISO 105/B02, Xenon Arc lamp
- Perspiration light : ATTS 25.7kJ/m², 420nm, 0.7W/m² Acid (upper) / Alkaline (lower)
- Washing : M&S C4A
- Perspiration contact : ISO 105 E04 Acid (upper) / Alkaline (lower)
- Chlorinated water : ISO 105 E03

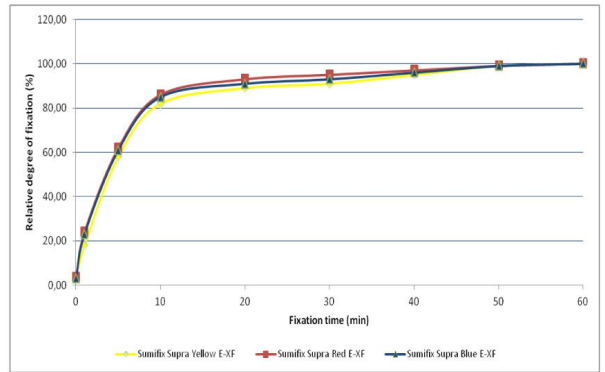
- 0 : Suitable
- X : Not –suitable
- Δ : Limited concentration*

* for details please consult SCE

Trichromatic combinations

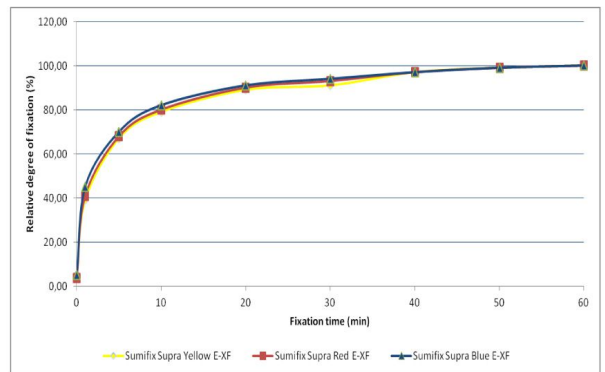
Pale Shade

| | |
|--------------------------------|----------------|
| Sumifix Supra Yellow E-XF | 0,077% |
| Sumifix Supra Red E-XF | 0,080% |
| Sumifix Supra Blue E-XF | 0,070% |
| Total dye concentration | 0.227 % |



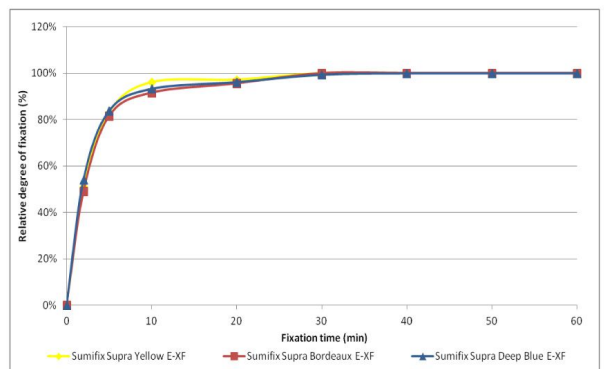
Green Shade

| | |
|--------------------------------|---------------|
| Sumifix Supra Yellow E-XF | 1.88 % |
| Sumifix Supra Rubine E-XF | 0.45 % |
| Sumifix Supra Blue E-XF | 0.90 % |
| Total dye concentration | 3.23 % |



Brown Shade

| | |
|--------------------------------|---------------|
| Sumifix Supra Yellow E-XF | 1.35 % |
| Sumifix Supra Bordeaux E-XF | 0.90 % |
| Sumifix Supra Deep Blue E-XF | 0.75 % |
| Total dye concentration | 3.00 % |



Trichromatic combinations recommended for exhaust dyeing on cotton and viscose:

Sumifix Supra E-XF dyes

Standard shades

| Shade | Yellow element | Red element | Blue element |
|-----------------------|-------------------|--|--|
| Pale to medium | SF SP Yellow E-XF | SF SP Red E-XF SF SP Bordeaux E-XF | SF SP Blue E-XF SF SP Deep Blue E-XF |
| Medium to deep | SF SP Yellow E-XF | SF SP Red E-XF SF SP Bordeaux E-XF SF SP Rubine E-XF | SF SP Deep Blue E-XF |
| Deep | SF SP Yellow E-XF | SF SP Red E-XF SF SP Bordeaux E-XF SF SP Rubine E-XF | SF SP Deep Blue E-XF (SR SP Navy S-HBU) |

Non Standard Shades

| Shade | Yellow element | Red element | Blue element |
|--|--|--|---|
| Bright Green and Turquoise | SF SP Lemon Yellow E-XF SF SP Yellow E-XF | SF SP Red E-XF | SF SP Blue E-XF SR SP Sky Blue S-PX SR Turquoise Blue G Conc. |
| Scarlet and Marlboro Red | SF SP Lemon Yellow E-XF SF SP Yellow E-XF | SF SP Red E-XF SF SP Scarlet E-XF SR SP Br. Orange RL 150% | SF SP Blue E-XF |
| Deep Red | SF SP Yellow E-XF | SF SP Red E-XF SF SP Bordeaux E-XF SF SP Rubine E-XF | SF SP Blue E-XF SF SP Deep Blue E-XF |
| Special Blues: Royal-, Electric-, Sky-, Bright Blue | | SF SP Red E-XF SF SP Br. Red 3BF 150% | SF SP Blue E-XF SR SP Sky Blue S-PX SF SP Blue BRF 150% SF Br. Blue R Spl SF Br. Blue R 150% SR Turq. Blue G conc SF HF Blue 2R |
| Black shades | SF SP Yellow E-XF | SF SP Red E-XF SF SP Bordeaux E-XF | SR Jet Black S-PX SR Ultra Black S-HBU (outside EU) SF Black B(A) 150% gran SF Black EX(A) Conc gran SR SP Marine S-PX |