


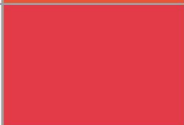



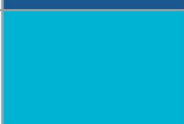





State-of-the-art range of bi-functional dyes with higher fastness and shades brilliancy

Sumifix Supra		%owf	Application
Brill.Yellow 3GF 150% gran.		2.0	Brilliant lemon yellow dye, with excellent levelling properties, recommended for pale green shades in combination with Turquoise Blue BGF(N)
Yellow 3RF 150% gran.		2.0	Standard yellow for all trichromatic combinations, light fast and dischargeable.
Scarlet 2GF 150% gran.		2.0	High build-up scarlet dye with good wet fastnesses, recommended for vivid red, scarlet and orange shades.
Brill. Red GF (C) 150% gran.		2.0	Brilliant red shade with good light fastness recommended for pale to medium shades; dischargeable to white
Brill. Red 3BF 150% gran.		2.0	Standard red dye, with good wash off properties, recommended for all trichromatic combinations.
Red 4BNF 150% gran.		1.3	Red dye with excellent leveling properties and a high build-up. Recommended for problematic pale shades and all medium to deep shades.
Blue BRF 150% gran.		2.0	Excellent leveling & light fastness for trichromatic dyeing & blue shades.
Turquoise Blue BGF(N)		3.0	Very good leveling & compatibility with Br. Yellow 3GF 150% for green shades.
Brown RNF 150%		2.0	Special dye for high light fastness requirement.
Navy Blue 3GF 150% gran.		2.0	Excellent leveling & high build-up properties, dischargeable to white. Good fastness to perspiration light.
Navy Blue BF gran.		3.0	Standard navy blue for trichromatic dyeing, excellent leveling & very high overall fastness.

Properties		Brill. Yellow 3GF 150%	Yellow 3RF 150%	Scarlet 2GF 150%	Brill. Red GF (C) 150%	Brill. Red 3BF 150%	Red 4BNF 150%	Blue BRF 150%	Turquoise Blue BGF(N)	Brown RNF 150%	Navy Blue 3GF 150%	Navy Blue BF	
Swatches dyeing depth (% o.w.f.)		2.0	2.0	2.0	2.0	2.0	1.3	2.0	3.0	2.0	2.0	3.0	
Fastness properties	Chlorinated water (20ppm)	3	3-4	4	3-4	4	4	3	2-3	4-5	3-4	3-4	
	Perspiration contact	Staining on cotton	4	4	4-5	4-5	4	4	3-4	4	4-5	4-5	4-5
			5	4	4-5	4-5	4	4	3	4	4-5	4	4
	Washing 60°C	Color change	5	5	4-5	4-5	4	4	4-5	4-5	4-5	4-5	4-5
			4-5	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5
	Perspiration light	Staining on cotton	5	4-5	4	5	5	5	4	4	3-4	4-5	4-5
		Color change	5	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	5	5
		Alkaline	4	4	4	3	2-3	2-3	3-4	3	4-5	3	3-4
Acid	4	4	4	3-4	3	3	4	3	5	3-4	3-4		
Light	5<	5<	4-5	5	5	5	5<	4-5	5	5	5		
Dyeing properties	Dischargeability	+	+	-	+	-	-	+	(+)	+	+	+	
	Migration properties	+	+	+	+	+	+	+	(+)	(+)	+	+	
	Optimum Exhaust dyeing temp. (°)	60	60	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)	100	70	20<	80	100<	100<	80	100	100	100	100	
	Water, 25°C (g/l)	100<	150<	100<	100	150<	150<	100<	100<	100	100<	100<	
Arylamine free fabric dyeings (<5ppm)		0	0	0	0	0	X	0	0	0	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

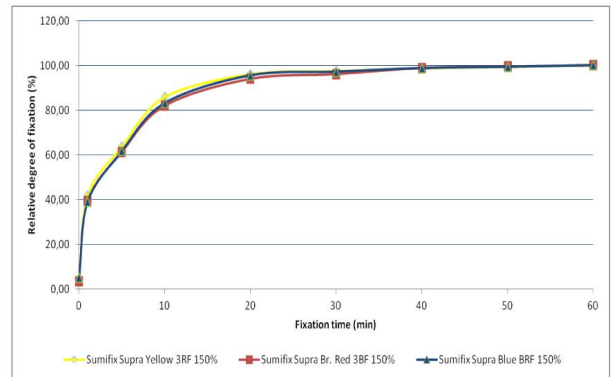
- Light : ISO 105/B02, Xenon Arc lamp
- Perspiration light : ATTS 25.7kJ/m², 420nm, 0.7W/m² Acid (upper) / Alkaline (lower)
- Washing : M&S C4A
- Perspiration contact : ISO 105 E04 Acid (upper) / Alkaline (lower)
- Chlorinated water : ISO 105 E03

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

Trichromatic combinations

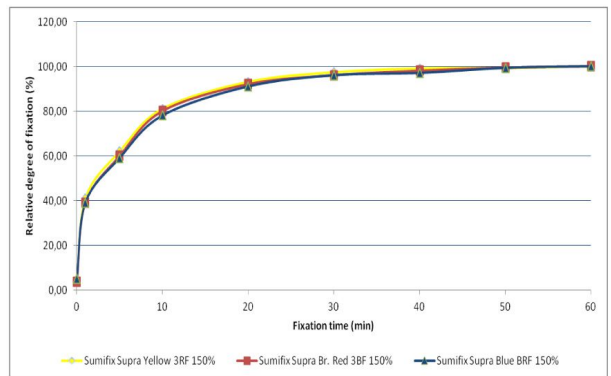
Green Shade

Sumifix Supra Yellow 3RF 150%	0,86%
Sumifix Supra Red 3BF 150%	0,20%
Sumifix Supra Blue BRF 150%	0,51%
Total dye concentration	1,57%



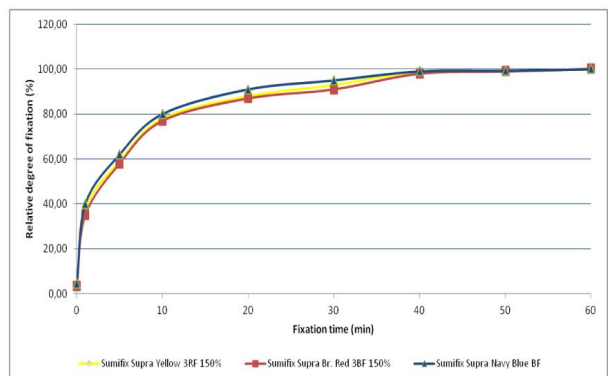
Brown Shade

Sumifix Supra Yellow 3RF 150%	0,53%
Sumifix Supra Red 3BF 150%	0,36%
Sumifix Supra Blue BRF 150%	0,30%
Total dye concentration	1,18 %



Grey-brown Shade

Sumifix Supra Yellow 3RF 150%	0,68%
Sumifix Supra Red 3BF 150%	0,55%
Sumifix Supra Navy Blue BF	0,88%
Total dye concentration	2,11 %



Trichromatic combinations recommended for exhaust dyeing on cotton and viscose:

Sumifix Supra

Standard shades

Shade	Yellow element	Red element	Blue element
Pale to medium	SF SP Yellow 3RF 150%	SF SP Br. Red 3BF 150%	SF SP Blue BRF 150%
Medium to deep	SF SP Yellow 3RF 150%	SF SP Br. Red 3BF 150% SF SP Red 4BNF 150%	SF SP Navy Blue BF SF SP Navy Blue 3GF 150%
Deep	SF SP Yellow 3RF 150%	SF SP Br. Red 3BF 150% SF SP Red 4BNF 150%	SF SP Navy Blue BF SF SP Deep Blue E-XF SF SP Navy Blue 3GF 150%

Non Standard Shades

Shade	Yellow element	Red element	Blue element
Bright Green and Turquoise	SF SP Yellow 3RF 150% SF SP Br. Yellow 3GF 150%	SF SP Br. Red 3BF 150%	SF SP Blue BRF 150% SF SP Turquoise Blue BGF(N) SR SP Sky Blue S-PX
Scarlet and Marlboro Red	SF SP Yellow 3RF 150% SF SP Br. Yellow 3GF 150%	SF SP Br. Red 3BF 150% SF SP Scarlet 2GF 150% SR SP Br. Orange RL 150%	SF SP Blue BRF 150%
Deep Red	SF SP Yellow 3RF 150%	SF SP Br. Red 3BF 150% SF SP Red 4BNF 150%	SF SP Blue BRF 150%
Special Blues: Royal-, Electric-, Sky-, Bright Blue		SF SP Br. Red 3BF 150%	SF SP Blue BRF 150% SF SP Turquoise Blue BGF(N) SR SP Sky Blue S-PX SF Br. Blue R Spl SF Br. Blue R 150% SR Turq. Blue G Conc.
Black shades	SF SP Yellow 3RF 150%	SF SP Br. Red 3BF 150%	SR Jet Black S-PX SR Ultra Black S-HBU SF Black B(A) 150% gran SF Black EX(A) Conc gran SR SP Marine S-PX