



CHEMANTRENE DYES

FOR PRINTING



ACHITEX MINERVA



THE
POWER
OF
COLOUR



CHEMANTRENE DYES

FOR CELLULOSIC AND ANIMAL FIBRES

Achitex Minerva Group produces and distributes a range of liquid VAT dyestuffs known as CHEMANTRENE. With a high degree of dispersion, they are suitable for printing fabrics and can be used on cotton, viscose, linen, wool, silk and blended fibres.

They can be applied by direct, discharge or 2-phases printing.

ADVANTAGES

- ✓ High degree of dispersion (about 90% < 1 micron)
- ✓ High colour rendering
- ✓ Very stable dispersion
- ✓ High degree of filtration
- ✓ High fastness to light
- ✓ High fastness to wash
- ✓ Resistance to post bleaching baths

TRADITIONAL PROCESS



Printing



Drying (<120°C)



Steaming



Washing



Oxidation



Soaping





DIRECT PRINTING (traditional process)

Direct printing is the application process most widely used for printing CHEMANTRENE dyestuffs. For good results in a direct printing, use of the following products is recommended:

- MINERGUM PF** Already swollen thickener, specially formulated with low viscosity and high dry matter content.
- REDOXONE PRINT** Reducing agent suitable for both alkaline and acid pH.
- DEFOAMER VO** Not siliconic defoaming agent with disaerating action.

To which must be added:

- SODIUM CARBONATE** Enables the formation of the dyestuff's alkaline leuco, the soluble form the fibre is able to absorb.
- GLYCERINE** Improves condensation of the saturated steam, thus creating the ideal conditions during the vaporisation phase.

These products are suitable for producing both the coloured and the cutting paste.

	COLOURED PASTE G/KG	CUTTING PASTE G/KG
CHEMANTRENE dye	X	X
MINERGUM PF (thickener)	500 - 550	650
DEFOAMER VO (defoaming agent)	5	5
REDOXONE PRINT (reducing agent)	80 - 100	50 - 60
glycerine	50 - 70	30 - 40
sodium carbonate	100 - 120	50 - 70
water	up to 1000	up to 1000

To prevent the rapid decomposition of the reducing environment, due to the humidity and the contact with atmospheric oxygen, prints should be dried using the equipment available, and then steamed.

Steaming must be carried out in the absence of air and with a constant flow of saturated steam between 100° to 102°C, lower or higher temperatures may impair fixation and the colour rendering.

Oxidation, meaning the re-transformation of the dye from soluble leuco to insoluble vat dye, takes place during the washing procedures which follow steaming, in presence of atmospheric oxygen or via a specific treatment.

Treatment can be carried out with:

- ✓ 2-3 cc/l of hydrogen peroxide 130 vol.
- ✓ 3-5 cc/l of acetic acid 30% sol.
- ✓ at a temperature between 40° and 50°C

or:

- ✓ 2-3 g/l of sodium perborate or sodium percarbonate
- ✓ 3-5 g/l of acetic acid 30% sol.
- ✓ at a temperature between 50° and 60°C

This is followed by soaping at boiling temperature with 1 g/l of ACHITEGAL A (soaping agent with high dispersing power). The process concludes with the final washes and treatments.



CHEMANTRENE DYESTUFFS IN DISCHARGE PRINTING

In this process, it is essential that the background dye of the fabric used is completely dischargeable.

In discharge printing, in fact, the background dye is destroyed and replaced by CHEMANTRENE dye, which is fixed in the same position.

This application differs from the standard processes in the dosages of the products to be used for paste preparation: REDOXONE PRINT (reducing agent) must be dosed depending on the desired effect and the background shade to be discharged.



2-PHASES PRINTING

2-phases printing includes an initial printing step performed without reducing agent, followed by a second step in which, after drying, the printed fabric is padded in an alkaline / reducing development bath and fixed by a short steaming process (known as "flashage").

The subsequent treatments after steaming are the same as in the traditional process.

Achitex Minerva recommends the use of BLANCOR A SUPER and REDOXONE PRINT in the development bath.

PRINTING PASTE STEP 1	QUANTITY G/KG
CHEMANTRENE dye	X
MINERGUM PF (thickener)	500 - 600
DEFOAMER VO (defoaming agent)	5
water	up to 1000

DEVELOPMENT BATH (PADDING) STEP 2	QUANTITY G/KG
BLANCOR A SUPER (reducing and whitening agent)	90
REDOXONE PRINT (reducing agent)	60
borax	10
sodium hydroxide	130 - 150
sodium sulphate	50
ACHITINA IMC (wetting agent)	2 - 3
MINERGUM PF (thickener)	100
water	up to 1000

Products should be added in the order shown in the recipe, under stirring.
The development bath should be left to stand for 1-2 hours before using in padding.



Stability of bath once ready
1-2 days



Stability in air after padding and
before steaming
20-30 seconds



Steaming time
25-45 seconds

CHEMANTRENE dyes		FASTNESS								REMARKS
		Light 1/1 - 1/10	Washing at 95°C	Washing with peroxides	Washing with hypochlorite	Ironing		Perchloroethylene		
						Immediately	After 4 hours			
		Full shade 50 g/kg	6	4-5	4-5	4-5	4	5	4	Pure yellow suitable for furnishing fabrics.
YELLOW 5GF M DP		Reduction 1/10	4-5	4-5	4-5	4-5	4	5	5	
		Full shade 50 g/kg	7-8	4-5	4	4-5	4-5	5	4-5	Bright colour recommended for blending to create brown and olive shades. Suitable for furnishing fabrics. Can be used on silk, acetate and polyamide.
GOLDEN YELLOW RK DP		Reduction 1/10	6-7	4-5	4	4-5	4-5	5	4-5	
		Full shade 100 g/kg	6-7	4	5	4-5	4	4-5	4	Very bright colour suitable for furnishing fabrics. Can be used on silk, acetate and polyamide.
BRILL ORANGE GR M DP		Reduction 1/10	5-6	4	4-5	5	4	4-5	4-5	
		Full shade 100 g/kg	6	4-5	4	4-5	4-5	5	4-5	Bright colour suitable for general use articles, washable articles and furnishing fabrics. Can be used on silk, acetate and polyamide.
BRILL PINK R DP		Reduction 1/10	4-5	4-5	4	4-5	4-5	5	4-5	
		Full shade 100 g/kg	7	4-5	4-5	4-5	4G	5	4-5	Ideal for blending for shade creation. Suitable for furnishing fabrics.
RED FBB DP		Reduction 1/10	6	4-5	4-5	4-5	4	5	4-5	
		Full shade 100 g/kg	6-7	4-5	4-5	4-5	4G	5	4-5	Suitable for outdoor furnishing fabrics.
BORDEAUX RR DP		Reduction 1/10	5-6	4-5	4-5	5	4	5	4	
		Full shade 100 g/kg	6	4-5	4-5	4-5	4B	4B	4-5	Suitable for indoor furnishing fabrics.
VIOLET RRN DP		Reduction 1/10	5	4-5	4-5	4-5	4	4	4-5	

Note: data contained in this document are based on our current knowledge and experience, they are not to be considered a guarantee, considering the numerous factors that can influence the process and application of our product. This data doesn't relieve users from carrying out their own preventive tests. The colours shown in this chart are purely indicative.



CHEMANTRENE dyes		FASTNESS								REMARKS
		Light 1/1 - 1/10	Washing at 95°C	Washing with peroxides	Washing with hypochlorite	Ironing		Perchloroethylene		
						Immediately	After 4 hours			
		Full shade 50 g/kg	7-8	4-5	4-5	4-5	4-5	4-5	5	Suitable for furnishing fabrics.
		BLUE CLF DP								
		Reduction 1/10	6-7	4-5	4-5	4-5	4-5	4-5	5	
		Full shade 50 g/kg	5	4-5	4	3-4	4-5	5	4G	Suitable for general use articles and washable articles. Caustic seersucker. Can be used on silk, acetate and polyamide.
		BLUE 2B DP								
		Reduction 1/10	4	4-5	4	4	4-5	3-4	4-5	
		Full shade 100 g/kg	7-8	4-5	4-5	4-5	3-4G	3-4G	4-5	Suitable for furnishing fabrics.
		DARK BLUE BOA DP								
		Reduction 1/10	5-6	4-5	4-5	4-5	3-4	3-4	4-5	
		Full shade 50 g/kg	7-8	4-5	4-5	4-5	3B	4-5	4	Bright colour suitable for both indoor and outdoor articles. Caustic seersucker. Can be used on silk, acetate and polyamide.
		BRILL GREEN FFB DP								
		Reduction 1/10	6-7	4-5	4-5	4-5	3	4-5	4	
		Full shade 100 g/kg	8	4	4	4	4G	4-5	4-5	Suitable for both indoor and outdoor articles. Caustic seersucker. Can be used on silk, acetate and polyamide.
		OLIVE GREEN B DP								
		Reduction 1/10	7	4-5	4	4	4-5	4-5	4-5	
		Full shade 100 g/kg	7-8	5	5	4-5	4G	4-5	4-5	Full brown suitable for furnishing articles.
		BROWN HRR DP								
		Reduction 1/10	6-7	4	4-5	4-5	4	4-5	4-5	
		Full shade 150 g/kg	7	3-4R	3-4R	3-4R	4R	4-5	3-4R	Suitable for furnishing fabrics.
		BLACK G DP								
		Reduction 1/10	4	3-4R	3-4R	3-4	4	4-5	3-4R	



2-phases printing

Light fastness values are from 1 to 8; other fastness values are from 1 to 5.
Shade variation is expressed by the letters: (R) Red - (G) Yellow - (B) Blue



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