



## *Synallon Neutral Dyeing Series*

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### **South Carolina Location**

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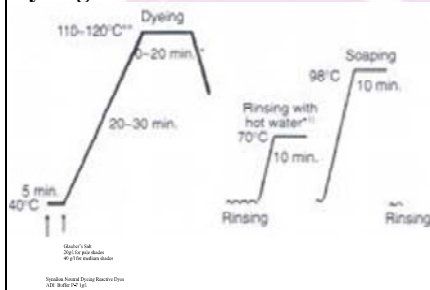
[www.greenvillecolorants.com](http://www.greenvillecolorants.com) • Customer Service. 800.832.8985 Fax. 800.763.1001

Dye Name	Solubility g/l 80°C 500c	Affinity	Staining on Polyester @ 2.00% depth	Xenon Light Fastness	Wash Test #2A		Wash Test #4A		Acid Perspiration Alt. * Cotton Stain	Crook Test Dry * Wet	Chlorinated Water		Effect Metal Ions Iron * Copper
					Alt.* Cotton Stain	Alt.* Cotton Stain	Alt. * Cotton Stain	Weak * Strong					
Synallon Yellow ND4G	70 100	Low	5	4 4-5	4-5 5	4-5 5	4-5 5	4-5 5	5 3-4	4 3-4	5 3-4 R		
Synallon Yellow NDSL	100 100	Low	5	4-5 4-5	4-5 5	4-5 4-5	4-5 5	4-5 5	5 3-4	4-5 4-5	5 5		
Synallon Yellow NDML	70 20	Moderate	5	4-5 4-5	4-5 5	4-5 5	4-5 5	4-5 5	5 3	4-5 4-5	5 5		
Synallon Yellow NDRL	50 10	High	5	4-5 5	4-5 4-5	4-5 5	4-5 5	4-5 5	4 2-3	4-5 4	5 5		
Synallon G. Yellow NDGL	60 20	Moderate	5	4-5 5	4-5 5	4-5 4-5	4-5 5	4-5 5	4-5 3	4-5 4-5	5 5		
Synallon Brown NDAL	100 70	Moderate	4 5	4-5 4-5	4-5 4-5	4-5 5	4-5 5	4-5 5	4-5 3	4-5 4-5	5 5		
Synallon Scarlet NDGL	100 70	Low	5	4 4-5	4-5 5	4-5 3-4	4-5 5	4-5 5	4-5 3	4 Y 4 Y	5 3-4		
Synallon Red ND3B	100 70	Moderate	4-5	3-4 4	4-5 5	4-5 5	4-5 5	4-5 5	4 2-3	4-5 4	5 3-4		
Synallon Red ND7B	100 70	High	5	3-4 4	4-5 5	4-5 3-4	4-5 5	4-5 5	4-5 2-3	4-5 4	5 3-4		
Synallon Blue NDBL	100 70	Low	5	4-5 4-5	4-5 5	4-5 4-5	4-5 5	4-5 5	4-5 3-4	4 3-4	5 3-4		
Synallon Blue NDMG	100 70	Moderate	5	3-4 4	4-5 4	4-5 4	4-5 5	4-5 5	5 2-3	4-5 4	5 3-4		
Synallon Dark Blue NDR	100 70	High	5	- 3-4	4-5 4	4-5 4	4-5 5	4-5 5	4 2-3	4 3-4	5 3-4		
Synallon Blue NDFL	100 70	High	5	4-5 5	4-5 4	4-5 4	4-5 5	4-5 5	4-5 3	1 1	5 3-4		
Synallon Turquoise ND2G	100 70	Low	5	3-4 4	4-5 3-4	4-5 3-4	4-5 5	4-5 5	5 2-3	4-5 3-4 Y	5 3-4		

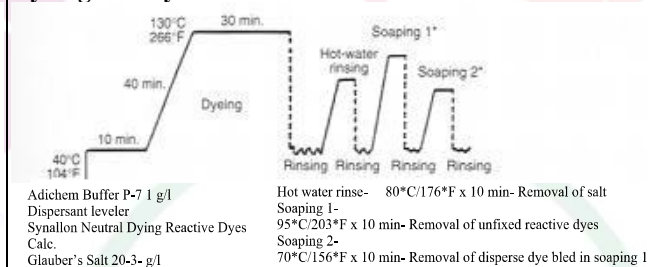
## General Dyeing Methods

Dyeing Depth	Holding Time			Glauber's Salt
	208°F	230°F	250°F	
Below 0.50%	20-30 min	10 min	0 min	20 g/l
0.5-2.00%	30-40 min	15 min	5 min	40 g/l
2.0-4.0%	40-50 min	20 min	10 min	60 g/l
Over 4.0%	50 min	30 min	15 min	60 g/l

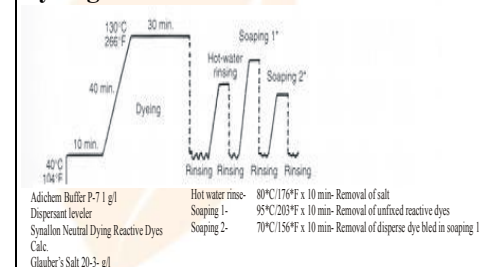
### Dyeing Conditions for 100% cotton



### Dyeing of Polyester Cotton Blend Fabrics



### Dyeing of Wool/Cotton Fabrics





## Dye Selection Tertiary Shades

### Pale to Medium Shades

Synallon Yellow NDML  
Synallon G. Yellow NDGL  
Synallon Red ND3B  
Synallon Blue NDMG

### Heavy Shades

Synallon Yellow NDRL  
Synallon G Yellow NDGL  
Synallon Red ND7B  
Synallon Dark Blue CNR

## Salt Requirements

Synallon Dyes	Sodium Sulphate	
	Cotton g/l	Rayon/ Mercerized Cotton G/l
Under 0.15%	10	7
0.16-0.25%	15	10
0.26-.50%	20	15
0.51-0.75%	30	20
0.76-1.00%	40	30
1.01-1.50%	50	35
1.51-2.0%	60	40
2.01-2.50%	70	50
2.51- and Over	80	60

## Test Data

### Solubility

Solubility is shown in water at 50°C (122°F) and 80°C (194°F). Water: Pure water and standard hard water (4.5°dH)

### Affinity

The affinity of dyestuffs was classified into three types depending on the dye uptake dyed at 130°C (266°F) for 30 minutes.

Group	Affinity	Dye-Uptake (%)
A	High	Above 90
B	Moderate	75-90
C	Low	Below 75

## Staining of Polyester Fibers

Materials:	Polyester Cloth + un-mercerized Cotton Cloth (50/50)
Liquor Ratio:	10:1
Temp and Time:	130°C (266°F) x 30 minutes
Dyebath:	Synallon Neutral Dyeing Reactive Dyes, 2.0% O.W.C.
	Glauber's Salt 80g/l
	Buffer (pH7)

Assessment:



The staining on each fiber was assessed with the AATCC Grey Scale For Evaluating Staining Color fastness tests (ISO Standard R105/1)





Lightfastness: AATCC Test Method 16-1993  
Washfastness: AATCC Test Method 15-1994 Test # 2A , AATC Test Method 15-1994 Test # 3A  
Perspiration Fastness: AATCC Test method 15-1994  
Crockfastness: AATCC Test Method 8-1989  
Chlorinated Water: AATCC Test Method 3-1989

### Effect of Metallic Ions

Material:	Un-mercerized cotton hosiery
Liquor Ratio:	20:1
Temp. and Time:	130°C (266°F) x 30 minutes
Dyebath:	Synallon Neutral Dyeing Reactive Dyes
	Glauber's Salt 80 g/l
	Buffer (pH7)
Cu <sup>++</sup>	Copper Sulphate (0.02% O.W.F.)
Fe <sup>+++</sup>	Ammonium Ferric Sulfate (0.05% O.W.F.)

Assesment:

The change in color of the dyed goods from the bath containing metallic ions was assessed in comparison with goods from a normal bath. The Grey Scale for Evaluation Color (ISO Standard R105/1) was applied for the assesment.

### \*\*Disclaimer:

Seller assumes no obligation or liability, whether in contract, tort, negligence, strict liability or misrepresentation for any advice or assistance given Buyer in relation to the merchandise, such advice or assistance, written or oral, being given without charge and accepted by Buyer's request and at his sole and exclusive risk. Samples will be made available at Buyer's request. Buyers are urged to make their own tests of any product described herein or of any proposed application with respect to which advice or assistance from Seller may be sought.

The fastness properties of the enclosed dyeings are dependent upon the conditions to which they are subjected, and may vary considerably if the dyed fabric is treated with additional chemicals such as fixing or finishing agents. Consequently, the dyed/finished fabric should be tested to assure that the fastness properties meet the necessary requirement. Not all shades can be produced with desired fastness properties. This point should be carefully considered before putting shades into production. The information given is based on work done in our laboratories; consideration should be given to possible variations under local conditions.

