



DIRECT DYES

# DIRETTI & DIRETTI LUCE GAMMACOLOR DIRECT DYES

Gammacolor Direct dyes (Diretti and Diretti Luce) are used on cotton and other cellulosic fibers with easy (direct) application methods. For this reason they play an important position in dyeing of textiles; In fact even if they don't own great wet rubbing fastness, they show very good light fastness and also all the other fastness values are good.

## APPLICATION METHOD:

Dyeing with Gammacolor Diretti and Diretti Luce dyes should be performed as follow:

Prepare a solution of:

- X% Direct dye
- 0,2% Sodium Carbonate & Phosphate (eventually)
- 0,5% solubilizing for direct dyes (eventually)

Bring the temperature at boiling point while stirring.

Add that solution to the warm dyebath (40°C).

Start dyeing process bringing the temperature at 98°-105 °C.

Add from 15(below 3% direct dye) to 30 g/l (over 3% ) of sodium sulphate anhydrous.

Keep on dyeing for 45-60 minutes.

Lower the temperature and release the dyebath.

Make two cold rinses

## Treatment with fixer

When it's needed to improve wet rubbing fastness and washing fastness of Gammacolor direct dyes

You may treat the dyed and rinsed material with:

- 1-3% Gammafix TN
- 2 ml/l Acetic acid 80% (pH 5-6)

Cold treatment for 25 minutes; then centrifuge without rinsing. Dry.

## Shade card

Fastness are shown with 3 numbers, indicating, respectively: dye fading; staining on cotton; staining on wool.

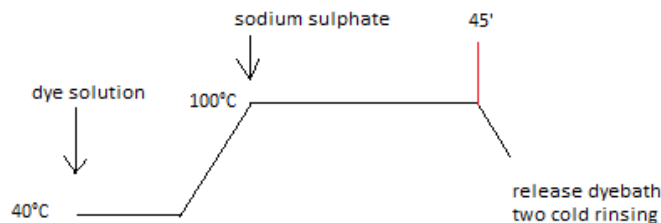
Dischargeability was evaluated after treatment with Rongalite applied in neutrall and alkaline printing paste.

## EXHAUSTION METHOD:

% solubilized Direct dye

15-30 g/l Sodium sulphate

Start dyeing process at 40°C. Add the dye solution; rise up temperature at 100°C. Add sodium sulphate. After 45' lower the temperature and release dyebath. Rinse twice with cold water.



Diretti & Diretti luce Direct dyes	%	Dye	CI	Solubility g/l		Migrating power	Xenotest 1/12 1/3 1/1	Water	Sea water	Washin g 40°C	Rubbing		Acidic perspira tion	Alkaline perspira tion	Dischargeabili ty	
				60°C	90°C						dry	wet			neutral	alkaline
	1	GIALLO B	28	25	40	2	6 5 4-5	4 3-4 4-5	4 4 5	4 3-4 4-5	4-5 3-4	4-5 4-5 5	4-5 4-5 5	1	1	
	1	CRISOFENINA G	12	15	20	4-5	4-5 4 3-4	2 2-3 1	2-3 3 1-2	1-2 4 2	4 3	2-3 3-4 2	2-3 3-4 2	4	2-3	
	1	Giallo PG	142		50		5-6 6 6	4 4 -		4 3 -	5 3-4	4-5 5 -	4-5 5 -	3	1-2	
	1	Giallo VG 400%	157				4 4-5	3-4 3-4 2		3 5 2-3	5 4-5	3-4 4 1-2	3 4-5 1-2			
	1	Giallo 5G	27	12	15	3-4	4-5 3-4 3	4 3-4 4-5	4-5 4-5 4-5	3-4 3-4 4-5	4-5 3-4	4 4-5 4-5	4 3-4 5	1-2	2	
	1	Giallo 4GL 200%	44	25	30	4-5	4-5 4 3-4	4 R 3 4-5	4 R 4 4-5	3-4 3-4 4-5	4-5 3-4	3-4 4-5 5	3-4 3-4 4-5	4	3	
	1	GIALLO R	50	16	16	4-5	6-7 5-6 5	3-4 4 2	4 4 4	3 4-5 3-4	4-5 4	4 4-5 2	4 5 2	5	4-5	
	1	GIALLO RL	86	50	80	3-4	5-6 5-6 5	4-5 3-4 4	4-5 4 4-5	4-5 3-4 3	5 3-4	4-5 3 3	4-5 3 3	4	2	
	1	GIALLO 4RL	106	50	60	3	7 6 5	4-5 3-4 3	5 4-5 4	5 3-4 3-4	5 4	5 4-5 4	5 4 4	1	1	
	1	Arancio F5GL	46	50	50		4-5 5-6 6	4 2 3-4	4 3-4 5	3-4 2-3 4	5 4	4 2-3 4-5	4 2-3 4-5	4-5	2-3	
	1	Arancio ARL	mix	45	70	3	5-6 5-6 5-6	4-5 3 4	4 3-4 4	4 3-4 4	4-5 3-4	4-5 3 4	4-5 3 4	3-4	2-3	
	1	ARANCIO WS	102	55	60	4	3-4 3 2-3	4-5 4 3	4 4-5 3	3-4 4-5 2-3	5 3	4 3-4 2	4 4-5 2	3-4	3	

Diretti & Diretti luce Direct dyes	%	Dye	CI	Solubility g/l		Migrating power	Xenotest 1/12 1/3 1/1	Water	Sea water	Washin g 40°C	Rubbing		Acidic perspira tion	Alkaline perspira tion	Dischargeabili ty	
				60°C	90°C						dry	wet			neutral	alkaline
	1	ARANCIO F2GL	39	32	45	2-3	6-7 6 4-5	3-4 2-3 4	4 3-4 4-5	3-4 3 4-5	4-5 4	4 3-4 4-5	4 3-4 4-5	3	2	
	1	ARANCIO 3GDL	57	50	65	5	6-7 6 5-6	4 3-4 4	3 2 4	3-4 4-5 4-5	4-5 4	3-4 1-2 3-4	3-4 1-2 3-4	5	4-5	
	1	ARANCIO EGL	34	25	30	2-3	5-6 5 4-5	3 3 4	3-4 3 3-4	4-5 3 3	4-5 2	4 3-4 4	4 3 3	3	2	
	1	ARANCIO 3R	37	36	45	2	5-6 5 4	4 2-3 4	4B 3-4 4	4 3 5	4-5 3-4	4 3-4 5	4 3-4 5	2-3	2-3	
	1	BRUNO BRL/N	mix	30	35	2-3	6 5-6 4-5	4-5 4 4	4-5 4 4	4 4-5 3-4	4-5 3	4-5 4 3-4	4 4 3-4	3	2	
	1	BRUNO GGL	115	36	36	2	5-6 5 3-4	4-5 2-3 4-5	4-5 3-4 4.5	4 3 4-5	4 3	4-5 2-3 4-5	4G 3 4-5	3-4	2	
	1	BRUNO RL	116	30	50	3-4	6 5-6 4-5	4 3 3	4 3-4 3-4	4-5 3-4 3	4-5 2	4 3-4 4	4 3 4	3-4	2-3	
	1	BRUNO BL	103	50	75	3-4	6-7 6 5	4 3-4 4-5	4 4 4-5	4 4 5	4 2-3	4-5 3 4-5	4 3 4	3-4	2	
	1	BRUNO 3R	111	50	50	2	6-7 5-6 4-5	5-4 1-2 2-3	3-4 2 3	3 2-3 4-5	2-3 2	4 1-2 3	4 1-2 3	2	2	
	1	BRUNO M/NB	MIX	30	30	2	4-5 3-4 2-3	4 4-5 3	4 4-5 3-4	4 4-5 3	4 3	4-5 4 3-4	4 3-4 2	2	2	
	1	Bruno BRC	Mix	25	30	3	5-6 5 3-4	4 2-3 3-4	4G 4 4-5	3 2-3 4-5	4-5 3-4	4G 2 4-5	4 2 4-5	4-5	4-5	
	1	Bruno BRL corrodibile	Mix	45	60	5	5-6 5 4-5	3-4 3 3	3 3 3	3 4-5 4		3 2 3	3 2 3	4-4	4-5	

Diretti & Diretti luce Direct dyes	%	Dye	CI	Solubility g/l		Migrating power	Xenotest 1/12 1/3 1/1	Water	Sea water	Washin g 40°C	Rubbing		Acidic perspira tion	Alkaline perspira tion	Dischargeabili ty	
				60°C	90°C						dry	wet			neutral	alkaline
	1	Bruno GTL	218	70	70		3-4 3-4 4	4 4-5 4-5	5 5 5	4 3 5	4 3	5	5	5	5	
	1	Bruno BRK-N	mix	25	30	2	5 4-5 4	2-3 2-3 1-2	3 3-4 2-3	3 2-3 4-5	4-5 3-4	4 3-4 5	4 3-4 5	2-3	2-3	
	1	Scarlatto B	89	50	50	3	4-5 4 3	4 3 3-4	4 4 4-5	3-4 3 4-5	4-5 3	4 3-4 3-4	4 3-4 4	3-4	3-4	
	1	Scarlatto 4BS	23	20	20	3	3-4 3 2-3	3-4 3 4	3-4 3 4	3-4 3 4-5	3-4 3	4 3 3-4	4 3 4	4-5	4	
	1	Scarlatto 8RW	MIX	25	30	3	4 3-4 3	4 4 3-4	4 4 4	3 4-5 3	3-4 3	4-5 4-5 3	4-5 4 3-4	3-4	2-3	
	1	Scarlatto FGG	224	30	50	2	3-4 3-4 2-3	4-5 3 5-4	4-5 3-4 3-4	4-5 3 4	4 2	3-4 3 3-4	3 2-3 3-4	3	3	
	1	Rosa 2BL	75	35	38		3 3-4 4-5	4 3-4 4-5	4-5 3-4 5	3-4 4-5 5		4-5 3-4 5	4-5 3-4 5	5	5	
	1	Rosa B	9	30	40		3 3-4 4-5	4 3-4 4-5	4-5 3-4 5	3-4 4 5		4-5 3-4 5	4-5 3-4 5	5	5	
	1	ROSA LR	227	50	60	2	3 3 2	3-4 2-3 3	4 2-3 3	4-5 3-4 3	4-5 2-3	2 1-2 2	2 1-2 2	2	2	

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				60°C	90°C						dry	wet			neutral	alkaline
	1	Rosso F4BL	212	30	30		5 5-6 6	4-5 3-4 4	4 3-4 3-4	4-5 4 4		3-4 2 3	3-4 2 3	4-5	4-5	
	1	ROSSO 3B	80	36	45	2	5 4-5 3	4B 2-3 4	3-4G 3-4 4-5	3 3 4-5	4-5 4	3G 2-3 4-5	4G 2-3 4-5	3-4	3-4	
	1	ROSSO 4B 200%	81	40	40	2	5 4-5 4	2-3 2-3 1-2	3 3-4 2-3	1-2 4-5 1-2	5 3-4	3 2-3 1	3 3 1	4-5	4-5	
	1	ROSSO RWL	243	50	60	3	6 5 4	4 3-4 3-4	4 3-4 3-4	4-5 3-4 4	4 3	2-3 2 2	2-3 2 2	3	3	
	1	ROSSO 6BL	79	12	16	3	6 5-6 5	3-4B 2-3 4	3 B 3 4	3B 2-3 4-5	4-5 3-4	4B 2-3 4-5	3-4B 2-3 4-5	4-5	4-5	
	1	Bordò 3BLE	Mix	30	30	3	6 5-6 5	4 3 1-2	4 3-4 2	3 4-5 2	4-5 3-4	4-5 4 3-4	4 4 3-4	3	2	
	1	BORDEAUX B/NB	MIX	30	30	5	4-5 4 3-4	2-3 2-3 1	3 3 2	2 2-3 2	4 3	3 2-3 2	3 3 2	4-5	4-5	
	1	BORDEAUX BL	mix	30	30	3	6 5-6 5	4 3 1-2	4 3-4 2	3 4-5 2	4-5 3-4	3 3 1-2	3 3-4 1	2-3	2	
	1	RUBINO BL	83.1	30	40	2-3	6-7 6 5-6	4 3-4 3-4	4 3-4 3-4	4-5 4 3-4	4 1-2	2 1-2 2	2 1-2 2	3	3	
	1	VIOLETTO 2RBL	mix	20	25	3-4	4-5 4 3-4	3 2-3 4	3-4 2-3 3-4	3-4 2-3 3-4	4 2	2-3 1-2 2-3	3 2-3 3	3-4	3-4	
	1	VIOLETTO BL	51	10	13	4-5	4 4 3	3-4 1-2 4	3B 2 4	2-3 2 4-5	3-4 2-3	3 2 4	3-4 3-4 4	4-5	4-5	
	1	Violetto RLL new	mix	30	40		3 3-4 4-5	4 3-4 4-5	4-5 3-4 5	3-4 4 5			4-5 3-4 5	4-5 3-4 5	5	

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				60°C	90°C						dry	wet			neutral	alkaline
	1	VIOLETTO 3BL	mix	10	13	4	4-5 4 3	3-4 2 4	3B 2 4	3 2-3 4-5	3-4 2-3	3 2 3-4	3-4 3-4 4	4-5	4-5	
	1	VIOLETTO 4BL	66	10	15	2-3	5-6 4-5 4	3B 2 2-3	3B 2-3 3-4	3 2-3 4	4 2-3	2-3B 1-2 4-5	2-3B 1-2 4-5	3	2-3	
	1	VERDE B/NB	MIX	20	25	4	5 4-5 4	3-4 4 3	4 4 3-4	3-4 4-5 3	4-5 3-4	3 4-5 3	3 4-5 3	4	3-4	
	1	VERDE 5GL	28	12	20	3-4	6-7 6 5-6	4B 3-4 3-4	4B 3-4 4	3-4G 3 5	4-5 3	4B 3 4	4B 3-4 4	2	2	
	1	VERDE 2BLL	26	17	25	2-3	5 4-5 3-4	4-5 2-3 4	4-5 3-4 4-5	4 3-4 4-5	4-5 3	4-5 1-2 4-5	4-5 2 4-5	3	2-3	
	1	VERDE 5B	mix	17	20	3	5-6 5 4-5	4-5 4 4	4-5 4 4-5	4 4 4-5	4-5 3	5 3 3	4-5 3 3	1	1-2	
	1	TURCHESE G	86	30	50	4	6 5-6 4	2-3R 2 2-3	3R 2 3-4	1-2 4 5	4 2	2-3 1-2 4	2-3 1-2 4	3-4	3	
	1	TURCHESE FBL	199	40	55	4-5	6-7 6 5	3 2 3	4 3 3-4	2-3 3 5	4-5 2-3	3-4 3 4	3-4 1-2 4	4-5	2	
	1	BLU GL	293	20	25	3	6-7 6 5-6	3 1-2 3-4	3-4 2 3-4	1-2 1-2 5	4 2-3	3-4 3 1-2	3 3-4 1-2	1	1-2	
	1	Blu K-G	mix	20	25	3	5 4-5 4	4 2-3 3-4	4 4 4-5	3-4 3 4-5		4 2-3 4-5	4 2 4-5	4-5	4-5	
	1	Blu FRG	Mix	40	50	3	5 5 4-5	4 2-3 4	4 3-4 4	4 3 2		4-5 3-4 3-4	4 3-4 3	3	3	
	1	Blu TLE	mix	20	25	3	5-6 5 3-4	4 2-3 3-4	4 4 4-5	3 2-3 4-5		4 2 4-5	4 2 4-5	4-5	4-5	

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				60°C	90°C						dry	wet			neutral	alkaline
	1	BLU F2G	225	20	25	3-4	5 4-5 3	1-2 1 2-3	2 1 2-3	1 3 4-5	4-5 3	2 1 2	2 1 2	3-4	3-4	
	1	BLU BGL	98	20	20	3	6 5-6 3-4	3 1 2-3	3G 2 3-4	3 1-2 4	4-5 3-4	3 2 3	3 2 3	3	3	
	1	BLU RGB	80	40	50	3	5-6 5-6 5	4 2-3 4	4 3-4 4	4 3 2	4-5 3-4	4-5 3-4 3-4	4 3-4 3	4	4	
	1	BLU FGL 400%	90	70	90	3-4	6 4-5 4	4 1-2 3	4 2 3	3 2-3 5	5 3-4	3-4 1-2 3-4	3-4 1 3-4	1-2	1	
	1	BLU GLF	85	50	75	3	6 5 3-4	4-5 2 3	4-5 2 3	4 2-3 5	4-5 2-3	3 1-2 3	3-4 2 3	4-5	4-5	
	1	BLU 4GL 300%	78	20	25	2-3	5 4-5 3-4	4 2-3 3-4	4 4 4-5	3-4 2-3 4-5	4-5 3-4	4 2 4-5	4 2 4-5	4-5	4-5	
	1	BLU BGRL	Mix	25	30	4	6 5-6 6	3 2-3 3	3-4 3 3-4	3 4 4-5	4-5 3-4	3-4 3-4 2-3	3-4 3 1-2	4	3-4	
	1	BLU BRR	71	25	30	3	5-6 5 3-4	4 2-3 3-4	4G 4 4-5	3 2-3 4-5	4-5 3-4	4G 2 4-5	4 2 4-5	4-5	4-5	
	1	BLU 2BR	222	20	25	3-4	6-7 5-6 4-5	4 2 4-5	4 4 5	4 2-3 5	4-5 3	4-5 3 5	4 3 5	4	4	
	1	Blu 4BL	200	50	50		3-4 5 5	4-5 5		4-5 4		4-5 5	4-5 5	2-3	2-3	
	1	Blu BFF	mix	20	25	3	5 4-5 3	2 1 3	3 2 3	1-2 1-2 4-5		3 2 2	3 2 2	2	2	



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				60°C	90°C						dry	wet			neutral	alkaline
	2	BLU NERO DIAZO BNB	299	17	17	1-2	3-4 3 2-3	4-5 4 3-4	4 4 3	4-5 4-5 2-3	4-5 2-3	4-5 3 2	4 3-4 2	4	3	
	1	GRIGIO CGLL 250%	112	20	30	2-3	6-7 6 5	4 3 3	4 3 3-4	4 3-4 2-3	4-5 3	3 3 3	3 2-3 2-3	5	4	
	1	GRIGIO 4GL 300%	62	30	40	3	6 5 4-5	4-5 2 2-3	4 2 3	4 3 5	4-5 3	4 2 3-4	3-4 1-2 4	2	2	
	1	GRIGIO NGL	113	30	50	2-3	7 6 5	4 4 5	4-5 4-5 5	3 2-3 5	5 3	4-5 3-4 4-5	4 2 4	2-3	2-3	
	1	GRIGIO RN	Mix	30	40	3	5 5 4-5	4 4 1-2	4 4 2-3	3-4 4-5 3	4-5 3-4	3-4 3-4 2	3-4 4-5 1-2	4	3-4	
	1	NERO L 200%	51	10	10	4-5	4-5 4 3	3-4 3 4	3-4 3-4 4-5	2 1-2 3-4	4-5 3-4	2-3 2 2-3	2-3 1-2 2	4	3	
	3	BENZONEROLO 800% EXTRASOLUBILE	22	-	-	2-3	3-4 3 2	4-5 4-5 4-5	4-5 4-5 4-5	4-5 2-3 4-5	4 2-3	4-5 4-5 4-5	4-5 3 4	4-5	2-3	
	3	NERO G CONC	19	35	35	2	4 3-4 2-3	4-5 4-5 4-5	4-5 4-5 4-5	4-5 2-3 4-5	4 2-3	4-5 4-5 4-5	4-5 3 4	4-5	2-3	
	2	NERO 80 150%	80	30	45	3-4	4 3 -	4 4 4	4-5 4-5 4	2-3 3 3			2-3	5	4-5	
	6	NERO CA LIQ.	22	-	-	2-3	3-4 3 2	4-5 4-5 4-5	4-5 4-5 4-5	4-5 2-3 4-5	4 2-3	4-5 4-5 4-5	4-5 3 4	4-5	2-3	
	3%	COTONEROL AB 600%	32 (mix)	15	20	1	4 3 2-3	4-5 4-5 3-4	4-5 4-5 4	4-5 5 3-4	4 2-3	4-5 4-5 4	4-5 4-5 3	5	3	







**GAMMACOLOR**

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