

**Remazol® Levafix® Procion® Sirius®**  
**Product overview of reactive and direct dyes**



# Five reasons to choose DyStar



## Reliable quality

All in-house processes at DyStar, from the procurement of raw materials to the sale of finished products, are governed by the ISO 9001 quality management system. Our reactive and direct dyes are standardised within very narrow tolerances to ensure reproducible dyeings. All dyes are available as dedusted powder or granulate formulations. Selected dyes are available as liquids.

## High safety and ecology standards worldwide

We take our responsibility for people and the environment very seriously. As a member of ETAD<sup>1</sup> we apply the same high standards of safety and ecology worldwide and are committed to the chemical industry's Responsible Care principles. That includes issuing safety data sheets containing information on all the main health and environmental effects of our dyes and recommendations on how to handle our products safely. Our reactive and direct dyes meet all the requirements set by major ecological standards such as Oeko-Tex Standard 100<sup>2</sup>.

## Innovative products

DyStar invests about four percent of sales in research and development. Development of dyes focuses on improving technical, economical and ecological properties for the benefit of our customers. Recent examples are Levafix CA, Remazol RGB and Procion XL+ dyes. DyStar has also developed the world's first fluorescent reactive dye, Remazol Luminous Yellow FL.

## Expert local advice

DyStar has trained and experienced representatives in all major markets to deal with questions about dyeing and printing. They can help you select the right products, support you in application processes and ensure that you reach your goals quickly and economically with our dyes.

## 24 hour internet service

DyStar sees the internet as an excellent complement to traditional ways of doing business. We therefore offer a customer service centre at <http://www.e-dyes.com>. Here you can select products to meet your requirements, call up the latest product information, request an offer and order our products. Register today to enjoy the benefits of this service.



<sup>1</sup> ETAD = Ecological and Toxicological Association of Dyes and Organic Pigment Manufacturers

<sup>2</sup> For more detailed information, please see our brochure "Oeko-Tex Standard 100".

# Our reactive and direct dyes at a glance

## Clearly structured product ranges

This brochure provides an overview of the reactive and direct dyes available from DyStar, worldwide. To simplify product selection, our dyes are divided into clearly structured product ranges. The pattern pages contain a brief profile of the product ranges and individual dyes. Also included is information on commercial forms, the processes they are suitable for, selected properties and recommended shade areas.

<b>Reactive dyes</b> <ul style="list-style-type: none"> <li>• Warm exhaust</li> <li>• Cold pad-batch</li> <li>• Continuous</li> </ul>	Performance	Levafix CA	Versatile, high-performance dyes
		Levafix	For special shades and specific fastness requirements
		Remazol RR	Reliable and reproducible dyeing of critical trichromatic shades
	Economical	Remazol RGB	Very economical in deep shades
		Remazol	Extensive range of dyes offering excellent value

<b>Reactive dyes</b> <ul style="list-style-type: none"> <li>• Hot exhaust</li> </ul>	Performance	Procion H-EXL	Reliable and reproducible dyeings with excellent levelling
	Economical	Procion XL+	Robust dyes for economical deep shades
		Procion H-E	Economical dyes for standard requirements

<b>Direct dyes</b>	Performance	Sirius L	Dyes for high light fastness requirements
	Economical	Sirius	Extensive range for all processes and for special requirements
		Sirius Black	High-quality, cost-effective black dyes

# Levafix CA

Levafix CA dyes set new standards in reactive dyeing.

- Flexible dyes that can be combined with many types of reactive dyes
- All-rounders for use in exhaust, cold pad-batch and continuous processes
- Good reproducibility and reliable application
- Excellent wash-off properties
- Good perspiration wet light fastness; good oxidative wash fastness (multiple wash cycles)
- Low staining of synthetic fibres
- High fixation yield; AOX-free
- Meets the requirements of major ecology standards

Brief description

	Commercial form	Process suitability											Recommended shade area								
		Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol®	TTN		Dischargeable (alkaline)	Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium
<b>Brilliant Yellow CA</b> 1/1 SD	100%		X	X	X		X	X	X	X	X	X	X	X		4-5	5-6	X	X	X	<b>Brilliant Yellow CA</b>
<b>Yellow CA</b> 1/1 SD	100%		X	X	(X)		X	X	X	X	X	X	X	X		5	5	X	X	X	<b>Yellow CA</b>
<b>Orange CA</b> 1/1 SD	100%		X	X	(X)		X	X	X	X	X	X	X	X		4	4-5	X	X	X	<b>Orange CA</b>
<b>Scarlet CA</b> 1/1 SD	100%		X	X	(X)		X	X	X	X	X	X	X	X		4	4-5	X	X	X	<b>Scarlet CA</b>
<b>Red CA</b> 1/1 SD	100%		X	X	(X)		X	X	X	X	X	X	X	X		4	4	X	X	X	<b>Red CA</b>
<b>Blue CA</b> 1/1 SD	100%		X	X	(X)		X	X	X	X	X	X	X	X		6	6-7	X	X	X	<b>Blue CA</b>
<b>Navy CA</b> Navy pale SD	100%		X	X	(X)		X	X	X	X	X	X	X	X		3-4	3-4		X	X	<b>Navy CA</b>

# Levafix

Reactive dyes for specific requirements.

- Excellent reproducibility in very pale shades where high light fastness is required
- Extremely brilliant shades
- Good chlorine and perspiration wet light fastness
- Fast to post-mercerisation
- For exhaust, cold pad-batch and continuous processes
- Meets the requirements of major ecology standards

## Brief description

	Commercial form	Process suitability											Recommended shade area								
		Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)	Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium	Dark
<b>Golden Yellow E-G</b> 1/1 SD		150%	40%	X	X	(X)		X	X	X	X	(X)	X	X		5	5-6	(X)	X	X	
<b>Yellow E-3RL</b> 1/1 SD		100%		X	X	(X)		X	X	X	X	X	X	X		5-6	5-6	X	(X)		
<b>Orange E-3GA</b> 1/1 SD		100%		X	X	(X)		X	X	X	X	X	X	X		2-3	3		X	X	
<b>Scarlet E-2GA</b> 1/1 SD		100%		X	X	(X)		X	X	X	X	X	X	X		3	3-4		X	X	
<b>Brilliant Red E-BA</b> 1/1 SD		100%		X	X	(X)		X	X	X	X	X	X	X		4-5	5	X	(X)		
<b>Brilliant Red E-4BA</b> 1/1 SD		100%	40%	X	X	(X)		X	X	X	X	X	X	X		3-4	4		X	X	
<b>Brilliant Red E-RN</b> 1/1 SD		100%		X	X	(X)		X	X	X	X	X	X	X		3	3-4		X	X	
<b>Brilliant Red E-6BA</b> 1/1 SD		100%	40%	X	X	(X)		X	X	X	X	X	X	X		3	4		X	X	
<b>Brilliant Blue E-FFN</b> 1/1 SD		150%		X	X	(X)		X	X	X	X	X	X	X		5-6	5-6	X	X		
<b>Royal Blue E-FR</b> 1/1 SD		100%	40%	(X*)	X*	(X*)		X	X		X		X			6	6-7		X	X	

\*Special process






# Remazol RR

Maximum reproducibility in critical trichromatic shades.

- Very reliable application in exhaust dyeing
- Good levelling properties
- Good build-up
- Easy to wash off
- On-tone fading (light fastness)
- Meets the requirements of major ecology standards

Brief description







		Brief description	Commercial form		Process suitability											Recommended shade area							
			Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)	Light fastness 1/6 S.D.		Light fastness 1/1 S.D.	Pale	Medium	Dark
<b>Yellow RR</b> 1/1 SD		Dischargeable yellow for trichromatic shades. Slightly photochromic.	100%			(X)	X			(X)	X	(X)				(X)	X	4	4	X	X	X	<b>Yellow RR</b>
<b>Orange RR</b> 1/1 SD		Brilliant orange dye for combination and trichromatic shades.	100%			X	X			X	X	X				X		4	4-5	X	X	X	<b>Orange RR</b>
<b>Red RR</b> 1/1 SD		Red dye for trichromatic shades.	100%			(X)	X			X	X	X				X		4	4-5	X	X	X	<b>Red RR</b>
<b>Blue RR</b> 1/1 SD		Cost-effective blue with good light fastness for trichromatic shades. Dischargeable.	100%			X	X			X	X	X	X			X	X	4	5	X	X	X	<b>Blue RR</b>

# Remazol RGB

Primarily for standard articles where low recipe costs are important.

- Economical
- Very good build-up in deep shades
- Suitable for exhaust, cold pad-batch and continuous processes
- Meets the requirements of major ecology standards

Brief description

		Brief description	Commercial form		Process suitability										Recommended shade area								
			Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)		Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium	Dark
<b>Brilliant Yellow RGB</b> 1/1 SD		Non-photochromic, cost-effective brilliant yellow. High colour strength. Good build-up. Dischargeable. Not recommended where oxidative bleach fastness is required.		100%		X	X			X	X	X	X		X	X	5	6	X	X	X	<b>Brilliant Yellow RGB</b>	
<b>Golden Yellow RGB</b> 1/1 SD		Cost-effective light fast yellow for trichromatic shades. Much better build-up in deep shades than C.I. Reactive Yellow 145/176.		100%		X	X			X	X	X	X		X		5	5-6	(X)	X	X	<b>Golden Yellow RGB</b>	
<b>Orange RGB</b> 1/1 SD		Cost-effective orange with high colour strength. Very good build-up. Recommended for economical deep shades. Ensure good wash-off in deep shades.		100%		X	X			X	X	X	X		X		4	5		X	X	<b>Orange RGB</b>	
<b>Deep Red RGB</b> 1/1 SD		Economical red component with high colour strength. Very strong build-up. For economical deep shades. Easy to wash off.		100%		X	X			X	X	X	X		X		4	5		X	X	<b>Deep Red RGB</b>	
<b>Red RGB</b> 1/1 SD		Economical red for trichromatic shades. Better build-up than C.I. Reactive Red 195/239 in deep shades. Very good levelling properties.		100%		X	X			X	X	X	X		X		4-5	5	(X)	X	X	<b>Red RGB</b>	
<b>Navy RGB</b> Navy pale SD		Cost-effective dischargeable navy component. Good build-up. Greener flare in artificial light (TL84). For all medium to deep combination and trichromatic shades.		150%		X	X	(X)		X	X	X	X	(X)	X		X	3	3		X	X	<b>Navy RGB</b>



# Remazol

Extensive range of reactive dyes offering excellent value.

- Wide range of economical dyes for exhaust, cold pad-batch and continuous processes
- Wide range of dyes for black and navy shades
- Extensive range of liquid dyes
- Selection of dyes for dischargeable dyeings
- Selection of dyes for AOX-free dyeing
- Meets the requirements of major ecology standards

## Brief description

	Commercial form	Process suitability											Recommended shade area									
		Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)	Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium	Dark	
<b>Luminous Yellow FL</b> 1/3 SD				X	X	X		X	X	X	(X)		X				3-4	4	X	X		
<b>Brilliant Yellow 4GL</b> 1/1 SD					X	X		(X)	(X)		(X)		(X)		X		5	6	X	X		
<b>Brilliant Yellow 3GL</b> 1/1 SD					X	X									X		5	5	X	X	X	
<b>Brilliant Yellow GL</b> 1/1 SD			150%	25%	(X)	(X)		X	X	X	(X)	X	X		X		5-6	6-7	X	X		
<b>Yellow GR</b> 1/1 SD			133%		X	(X)		X	X	(X)	X		(X)		X		4-5	5-6	X	X	X	
<b>Yellow R</b> 1/1 SD			100%	50%	X	(X)		X	X	(X)			(X)		X		5	6	X	X	(X)	
<b>Golden Yellow RNL</b> 1/1 SD			150%	50%	X	(X)		X	X	X	X		X		X		4-5	5		X	X	
<b>Yellow 3RS</b> 1/1 SD			133%			X	(X)	X	X	X	X						5	5-6	X	X		
<b>Orange BN</b> 1/1 SD			100%		X	X		X	X	X	X		X		X		3-4	4		(X)	X	
<b>Brilliant Orange 3R spec</b> 1/1 SD			100%	25%	X	(X)		X	X				(X)		X		4-5	4-5	X	(X)		

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Brief description






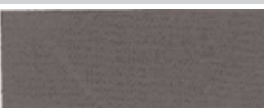

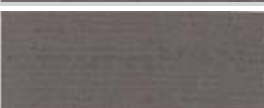
	Commercial form	Process suitability												Recommended shade area								
		Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)		Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium	Dark
<b>Brilliant Red BB</b> 1/1 SD		150%			X	X			X	X	(X)	X		X	X	X	4-5	5	(X)	X	X	<b>Brilliant Red BB</b>
<b>Red RB</b> 1/1 SD		133%	50%		X	X			X	X	X	(X)		X			4	4-5	(X)	X	X	<b>Red RB</b>
<b>Red GWF</b> 1/1 SD		100%	40%		X	X			X	X	X	X		X			4	5		X	X	<b>Red GWF</b>
<b>Brilliant Red F3B</b> 1/1 SD		100%	25%		X	X			X	(X)	(X)	X		X			3-4	4-5	(X)	X	(X)	<b>Brilliant Red F3B</b>
<b>Brilliant Red 3BS</b> 1/1 SD		100%				X	(X)		X	X	X	X		X			3-4	4	(X)	X		<b>Brilliant Red 3BS</b>
<b>Red 3B</b> 1/3 SD		100%			(X)	(X)			X	X	X			X			6	-	X			<b>Red 3B</b>
<b>Brilliant Violet 5R</b> 1/1 SD		100%			X	(X)			X	X	X			X			4-5	6-7	X	X	(X)	<b>Brilliant Violet 5R</b>
<b>Brilliant Blue R spec</b> 1/1 SD		100%	50%		X	X	(X)		(X)	(X)	(X)						6-7	7	X	X	(X)	<b>Brilliant Blue R spec</b>
<b>Brilliant Blue RN</b> 1/1 SD		100%			X	X	(X)		X	X	X	X		X			6-7	7	X	X	(X)	<b>Brilliant Blue RN</b>
<b>Brilliant Blue BB</b> 1/1 SD		133%	50%		X	X	(X)		X	X	X	X		X			6	7	X	X		<b>Brilliant Blue BB</b>

# Remazol

Extensive range of reactive dyes offering excellent value.

- Wide range of economical dyes for exhaust, cold pad-batch and continuous processes
- Wide range of dyes for black and navy shades
- Extensive range of liquid dyes
- Selection of dyes for dischargeable dyeings
- Selection of dyes for AOX-free dyeing
- Meets the requirements of major ecology standards










## Brief description

		Brief description	Commercial form		Process suitability											Recommended shade area							
			Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)	Light fastness 1/6 S.D.		Light fastness 1/1 S.D.	Pale	Medium	Dark
<b>Turquoise Blue G</b> 1/3 SD		Dischargeable turquoise. Economical turquoise/green shades in combination with Remazol Brilliant Yellow 3GL.	133%			(X)	X			X	X	X	(X)	X	X	(X)	(X)	5	6	X	X	X	<b>Turquoise Blue G</b>
<b>Brilliant Green 6B</b> 1/1 SD		For brilliant turquoise/green shades with high light and perspiration wet light fastness in combination with Remazol Brilliant Yellow 4GL or Remazol Brilliant Yellow GL.	175%			(X)	X			X	X	(X)	(X)	X	X	(X)		6-7	7-8	X	X	X	<b>Brilliant Green 6B</b>
<b>Black RL</b> 1/1 SD		For dischargeable grey shades with good light and perspiration wet light fastness.	100%	33%	(X)	X				X	X	X			X		X	5-6	6-7	X	X		<b>Black RL</b>
<b>Navy Blue GG</b> Navy pale SD		Economical, dischargeable navy dye. Good build-up. Green flare in artificial light (TL 84). For navy and bottle green shades, e.g. in combination with Remazol Golden Yellow RNL.	133%	33%	X	X	(X)			X	X	X	X	(X)	X	(X)	X	3-4	4		X	X	<b>Navy Blue GG</b>
<b>Black B</b> Navy pale SD		Economical, dischargeable navy, mainly for deep shades. Limited light and perspiration wet light fastness. Good build up. Good wash-off properties.	133%	50%	X	X				X	X	X	X	X	X	(X)	X	3-4	4		X	X	<b>Black B</b>
<b>Black A</b> Black SD		Economical deep black for exhaust dyeing with excellent wash-off properties. Good build-up. Low staining of polyamide.	100%		X	X				(X)	X				(X)			-	4-5			X	<b>Black A</b>
<b>Black NF</b> Black SD		Economical, dischargeable deep black with good wash-off properties.	100%	50%	X	X				X	X	X	X	X	X	(X)	X	-	4-5			X	<b>Black NF</b>
<b>Deep Black N 150</b> Black SD		Dischargeable, economical deep black.	150%	75%	X	X				X	X	(X)			X		X	-	4			X	<b>Deep Black N 150</b>

# Procion H-EXL

Maximum reproducibility and level dyeing in difficult dyeing conditions.

- Very reliable application in exhaust dyeing
- Excellent levelling properties
- For critical articles and dyeing conditions, e.g. CV, merc. CO, CEL/elastomeric fibres, garment dyeing, articles with poor dye penetration
- Low sensitivity to dyeing parameters when dyeing PES/CEL blends
- Good oxidative wash fastness (multiple wash cycles)
- Meets the requirements of major ecology standards




Brief description			Commercial form			Process suitability										Recommended shade area						
			Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)	Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium	Dark
<b>Yellow H-EXL</b> 1/1 SD		Light fast yellow dye. Mainly for trichromatic shades in combination with Procion Crimson H-EXL and Procion Navy H-EXL.	100%			X	(X)										5	5	X	X	X	<b>Yellow H-EXL</b>
<b>Brilliant Orange H-EXL</b> 1/1 SD		For brilliant oranges and scarlets. Better wet fastness than Procion Orange H-ER.	100%			X											3-4	3-4		X	(X)	<b>Brilliant Orange H-EXL</b>
<b>Deep Red H-EXL</b> 1/1 SD		Economical red component for medium to deep reds.	100%			X											3-4	4		X	X	<b>Deep Red H-EXL</b>
<b>Brilliant Red H-EGXL</b> 1/1 SD		For brilliant oranges, scarlets and reds.	100%			X											4-5	5	X	X		<b>Brilliant Red H-EGXL</b>
<b>Crimson H-EXL</b> 1/1 SD		Red component mainly for trichromatic shades in combination with Procion Yellow H-EXL and Procion Navy H-EXL.	100%			X											3-4	4	(X)	X	X	<b>Crimson H-EXL</b>
<b>Blue H-EXL</b> 1/1 SD		Bright, clear, reddish blue dye.	100%			X											4-5	5	X	X	X	<b>Blue H-EXL</b>
<b>Royal Blue H-EXL</b> 1/1 SD		Bright, reddish blue for blues and violets. Very good build-up in deep shades.	100%			X											3-4	4		X	X	<b>Royal Blue H-EXL</b>
<b>Sapphire H-EXL</b> 1/1 SD		Bright, greenish blue. Good build-up. High light fastness. Mainly for bright blue, navy and green shades.	100%			X	X										4-5	5	(X)	X	X	<b>Sapphire H-EXL</b>
<b>Navy H-EXL</b> Navy pale SD		Blue dye mainly for trichromatic shades in combination with Procion Yellow H-EXL and Procion Crimson H-EXL. Excellent levelling properties.	100%			X											3-4	4	(X)	X	X	<b>Navy H-EXL</b>

# Procion H-EXL

Maximum reproducibility and level dyeing in difficult dyeing conditions.

- Very reliable application in exhaust dyeing
- Excellent levelling properties
- For critical articles and dyeing conditions, e.g. CV, merc. CO, CEL/elastomeric fibres, garment dyeing, articles with poor dye penetration
- Low sensitivity to dyeing parameters when dyeing PES/CEL blends
- Good oxidative wash fastness (multiple wash cycles)
- Meets the requirements of major ecology standards

## Brief description

			Commercial form		Process suitability											Recommended shade area							
			Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)	Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium	Dark	
<b>Amber H-EXL</b> 1/1 SD		For pale trichromatic shades with high light fastness in combination with Procion Red Brown H-EXL and Procion Dark Blue H-EXL.	100%				X											5	5-6	X			<b>Amber H-EXL</b>
<b>Red Brown H-EXL</b> 1/1 SD		For dyeing pale light fast trichromatic shades in combination with Procion Amber H-EXL and Procion Dark Blue H-EXL. Good perspiration wet light fastness.	100%				X											6	6	X			<b>Red Brown H-EXL</b>
<b>Dark Blue H-EXL</b> 1/1 SD		For pale trichromatic shades with high light fastness in combination with Procion Amber H-EXL and Procion Red Brown H-EXL.	100%				X	X										5	5	X	X		<b>Dark Blue H-EXL</b>

# Procion XL+

Robust dyes for economical deep shades.

- Economical; options to shorten process times
- Reliable application and reproducibility
- Very good levelling properties
- Excellent build-up in very deep shades
- For critical articles and dyeing conditions
- Low sensitivity to dyeing parameters when dyeing PES/CEL blends
- Good oxidative wash fastness (multiple wash cycles)
- Meets the requirements of major ecology standards

Brief description

	Commercial form	Process suitability											Recommended shade area									
		Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN	Dischargeable (alkaline)	Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium	Dark	
<b>Yellow XL+</b> 1/1 SD	100%						X										5-6	6	X	X	X	<b>Yellow XL+</b>
<b>Brilliant Red XL+</b> 1/1 SD	100%					(X)	X										3	3-4		X	X	<b>Brilliant Red XL+</b>
<b>Rubine XL+</b> 1/1 SD	100%						X										3	3-4		X	X	<b>Rubine XL+</b>
<b>Cyan XL+</b> 1/1 SD	100%					X	X										4-5	5	(X)	X	X	<b>Cyan XL+</b>
<b>Dark Blue XL+</b> 1/1 SD	100%						X										3	3-4		X	X	<b>Dark Blue XL+</b>
<b>Navy XL+</b> Navy pale SD	100%						X										3-4	4			X	<b>Navy XL+</b>

# Procion H-E

Economical dyes for standard requirements.

- Economical
- Meets the requirements of major ecology standards

## Brief description

	Commercial form	Process suitability											Recommended shade area											
		Powder	Granulate	Liquid	Exhaust dyeing 50 °C	Exhaust dyeing 60 °C	Exhaust dyeing 80 °C	Exhaust dyeing 90 °C	Cold pad-batch	Pad-dry-pad-steam	Pad-dry-steam	Pad-(pad-)steam	Pad-dry-thermofix	Econtrol	TTN		Dischargeable (alkaline)	Light fastness 1/6 S.D.	Light fastness 1/1 S.D.	Pale	Medium	Dark		
<b>Yellow H-E6G</b> 1/1 SD						X											4	4-5	X	X				<b>Yellow H-E6G</b>
<b>Yellow H-E4R</b> 1/1 SD						X											5-6	6	X	X	X			<b>Yellow H-E4R</b>
<b>Orange H-ER</b> 1/1 SD						X											3-4	3-4		X	X			<b>Orange H-ER</b>
<b>Red H-E3B</b> 1/1 SD						X											4-5	5	X	X	X			<b>Red H-E3B</b>
<b>Red H-E7B</b> 1/1 SD						X											3-4	4		X	X			<b>Red H-E7B</b>
<b>Blue H-ERD</b> 1/1 SD						X											5-6	5-6	X	X				<b>Blue H-ERD</b>
<b>Blue H-EGN</b> 1/1 SD						X	X										4-5	5	(X)	X	X			<b>Blue H-EGN</b>
<b>Turquoise H-A</b> 1/1 SD						X											5	6	X	X				<b>Turquoise H-A</b>
<b>Navy H-ER</b> Navy pale SD						X											3-4	4		X	X			<b>Navy H-ER</b>

# Sirius L

Versatile dyes meeting high light fastness requirements. They are mainly used to dye furnishing fabrics and home textiles.

- Very high light fastness
- Homogeneous dyeing behavior
- High reproducibility
- Meets the requirements of major ecology standards

## Brief description

	Commercial form	Process suitability											Light fastness		Recommended shade area						
		Powder	Liquid	Exhaust dyeing of 100% CEL	One-bath one-step exhaust dyeing of PES/CEL	One-bath exhaust dyeing of PA/CEL	One-bath bleaching/dyeing (exhaust process)	Jig	Pad-steam	Pad-jig	Pad-roll	Viscose lining fabrics	Dischargeable (alkaline)	Without aftertreatment 1/2 S.D.	With Sirius A (1/2 S.D.)	Pale	Medium	Dark			
<b>Yellow K-GRL</b> 1/1 SD				X	X	X	X	X	X	X	X	X	X	6	6	X	X				<b>Yellow K-GRL</b>
<b>Orange 3GDL</b> 1/1 SD				X	X	X	X	X	X	X	X	X	X	6	5-6	X	X				<b>Orange 3GDL</b>
<b>Red F4BL</b> 1/1 SD				X		X	X	X	X	X	X	X	X	5	4	(X)	X	X			<b>Red F4BL</b>
<b>Rubine K-2BL</b> 1/1 SD				X	X	X		X	X	X	X	X	X	5-6	4-5	(X)	X	X			<b>Rubine K-2BL</b>
<b>Red Violet RL</b> 1/1 SD				X		X		X	X	X	X	X	X	5-6	4	X	X				<b>Red Violet RL</b>
<b>Grey K-CGL</b> 1/1 SD				X	X	X		X	X	X	X	X	X	6	5	X	X				<b>Grey K-CGL</b>



# Sirius

Extensive range of versatile direct dyes for exhaust and pad application.

- Economical
- Wide range of shades
- Suitable for all major processes
- Meets the requirements of major ecology standards








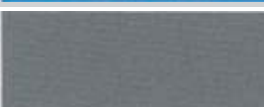

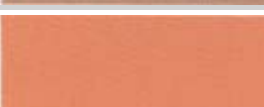
## Brief description

	Commercial form	Process suitability										Light fastness		Recommended shade area				
		Powder	Liquid	Exhaust dyeing of 100% CEL	One-bath one-step exhaust dyeing of PES/CEL	One-bath exhaust dyeing of PA/CEL	One-bath bleaching/dyeing (exhaust process)	Jig	Pad-steam	Pad-jig	Pad-roll	Viscose lining fabrics	Dischargeable (alkaline)	Without aftertreatment 1/2 S.D.	With Sirius A (1/2 S.D.)	Pale	Medium	Dark
<b>Yellow S-2G</b> 1/1 SD		100%	X	X		X	X	X			X	X	5-6	5	X	X	X	<b>Yellow S-2G</b>
<b>Yellow R</b> 1/1 SD		100%	27%	X			X		X			X	5-6	5-6	X	X	X	<b>Yellow R</b>
<b>Yellow K-CF</b> 1/1 SD		100%		X	X	X	X	X	X	X	X	X	5-6	4	(X)	X	X	<b>Yellow K-CF</b>
<b>Orange K-CF</b> 1/1 SD		100%		X	X	X	X	X	X	X	X	X	5-6	5	(X)	X	X	<b>Orange K-CF</b>
<b>Orange K-CFN</b> 1/1 SD		100%		X	X	X	X	X	X	X	X	X	5-6	5	(X)	X	X	<b>Orange K-CFN</b>
<b>Scarlet S-G</b> 1/1 SD		100%		X	X	X	X	X	X				3	2-3		X	X	<b>Scarlet S-G</b>
<b>Scarlet K-CF</b> 1/1 SD		100%		X	X	X		X	X				4	3-4		X	X	<b>Scarlet K-CF</b>
<b>Scarlet BN</b> 1/1 SD		100%		X		X	X	X	X			X	5	4	(X)	X	X	<b>Scarlet BN</b>
<b>Red F3B</b> 1/1 SD		100%		X		X	X	X	X	X	X	X	3-4	3	(X)	X	X	<b>Red F3B</b>
<b>Red K-BE</b> 1/1 SD		100%		X	X	X	X	X	X	X	X		3-4	3		X	X	<b>Red K-BE</b>

# Sirius

Extensive range of versatile direct dyes for exhaust and pad application.

- Economical
- Wide range of shades
- Suitable for all major processes
- Meets the requirements of major ecology standards



Brief description			C.I. Direct	Commercial form		Process suitability										Light fastness		Recommended shade area			
				Powder	Liquid	Exhaust dyeing of 100% CEL	One-bath one-step exhaust dyeing of PES/CEL	One-bath exhaust dyeing of PA/CEL	One-bath bleaching/dyeing (exhaust process)	Jig	Pad-steam	Pad-jig	Pad-roll	Viscose lining fabrics	Dischargeable (alkaline)	Without aftertreatment 1/2 S.D.	With Sirius A (1/2 S.D.)	Pale	Medium	Dark	
<b>Blue K-CFN</b> 1/1 SD		Recommended for medium to deep shades, also in combination with Sirius L dyes. Stable to HT conditions. Dischargeable.	Bl 085	100%		X	X	X	X	X	X	X	X	X	X	5	4	X	X	X	<b>Blue K-CFN</b>
<b>Blue K-GRLN</b> 1/1 SD		Economical, neutral blue. Stable to HT conditions. Suitable for use in trichromatic shades, especially on viscose lining fabrics. Dischargeable.	-	100%		X	X	X	X	X	X	X	X	X	4-5	4			X	X	<b>Blue K-GRLN</b>
<b>Blue GN</b> 1/1 SD		Greenish blue. Stable to HT conditions. Dischargeable. Recommended as a blue component for viscose lining fabrics.	Bl 078	100%		X	X		X	X	X	X	X	X	4	3-4			X	X	<b>Blue GN</b>
<b>Blue K-BE</b> 1/1 SD		Economical trichromatic blue. Stable to HT conditions. Dischargeable.	Bl 200	100%		X	X	X		X	X			X	5-6	5-6	X	X	X		<b>Blue K-BE</b>
<b>Blue S-BRR</b> 1/1 SD		Economical blue. Recommended for deep blue and navy shades, dark greens and browns. Very good build-up. Stable to HT conditions. Dischargeable.	Bl 071	100%		X	X	X	X	X	X	X	X	X	4-5	4			X	X	<b>Blue S-BRR</b>
<b>Royal Blue S</b> 1/1 SD		Extremely bright blue shade. Good build-up, high light and wet fastness. Stable to HT conditions.	-	100%		X	X	X		X	X	X	X	X	5	4			X	X	<b>Royal Blue S</b>
<b>Turquoise S-FBL</b> 1/1 SD		Bright shade, high light fastness. For turquoise and green shades in combination with Sirius Yellow S-2G. Stable to HT conditions. Good build-up, high solubility. Salt must be added to the rinse liquor.	Bl 199	100%		X	X	(X)		X	X	X	X	X	6	5-6	X	X	X		<b>Turquoise S-FBL</b>
<b>Green S-4B</b> 1/1 SD		Bright, bluish green, for greens, navies and blacks. HT-stable dye. High light fastness. Dischargeable.	Gr 026	100%		X	X	X		X	X	X	X	X	4	3-4	(X)		X	X	<b>Green S-4B</b>
<b>Brown BRK-N</b> 1/1 SD		Neutral brown. High solubility.	-	100%		X			X	X	X				4-5	3-4			X	X	<b>Brown BRK-N</b>
<b>Brown 3RL</b> 1/1 SD		High light fastness. Reddening component for beiges and browns. Good build-up. High solubility. Dischargeable.	R 084	100%		X			X	X	X	X	X	X	5	4	X	X	(X)		<b>Brown 3RL</b>

# Sirius

Extensive range of versatile direct dyes for exhaust and pad application.

- Economical
- Wide range of shades
- Suitable for all major processes
- Meets the requirements of major ecology standards

## Brief description

	C.I. Direct	Commercial form		Process suitability										Light fastness		Recommended shade area			
		Powder	Liquid	Exhaust dyeing of 100% CEL	One-bath one-step exhaust dyeing of PES/CEL	One-bath exhaust dyeing of PA/CEL	One-bath bleaching/dyeing (exhaust process)	Jig	Pad-steam	Pad-jig	Pad-roll	Viscose lining fabrics	Dischargeable (alkaline)	Without aftertreatment 1/2 S.D.	With Sirius A (1/2 S.D.)	Pale	Medium	Dark	
<b>Brown RL</b> 1/1 SD 	Br 116	100%		X	X			X	X	X	X	X		5	4	X	X	(X)	<b>Brown RL</b>
<b>Dark Brown G-V</b> 1/1 SD 	-	100%		X				X	X	X	X	X		2-3	2	X	X	X	<b>Dark Brown G-V</b>

# Sirius Black

Economical, high-quality blacks with a good ecological profile.

- Economical
- Liquid dyes available
- Meets the requirements of major ecology standards

## Brief description

	Commercial form	Process suitability											Light fastness		Recommended shade area			
		Powder	Liquid	Exhaust dyeing of 100% CEL	One-bath one-step exhaust dyeing of PES/CEL	One-bath exhaust dyeing of PA/CEL	One-bath bleaching/dyeing (exhaust process)	Jig	Pad-steam	Pad-jig	Pad-roll	Viscose lining fabrics	Dischargeable (alkaline)	Without aftertreatment 1/2 S.D.	With Sirius A (1/2 S.D.)	Pale	Medium	Dark
<b>Black VSF h/c</b> Black SD	Bk.022	100%		X	X	X		X					X	3-4	3			X
<b>Black S-VSF</b> Black SD	Bk.022		25%	X	X	X		X	X	X	X	X	X	3-4	3			X
<b>Black OB-V</b> Black SD	Bk.080	100%		X	X	X		X	X	X	X	X	X	3-4	3	X	X	X
<b>Black L-V</b> Black SD	Bk.051	100%		X			X	X	X	X	X	X	X	3	2	X	X	X
<b>Black FRB-V</b> Black SD	-	100%		X				X	X	X	X	X	X	3-4	3		X	X
<b>Black G</b> Black SD	Bk.019	100%	31%	X			X	X	X	X	X	X	X	3-4	3			X

# Dyeings

All dyes are illustrated in 1/1, navy pale or black standard depths on bleached, mercerised woven cotton fabric.

Please note that the appearance of the colours of the dye samples depends on the settings of your local PC and printer. For this reason, the shades illustrated will differ to some extent from the actual dyed samples.

## Light fastness

### **Test method:**

Light fastness (xenon arc) ISO 105-B02

### **Test fabric reactive dyeings:**

Bleached, mercerised cotton

### **Test fabric direct dyeings:**

Bleached cotton

## Dischargeability

The data on dischargeability refer to alkaline white discharges of dyeings at 1/2 S.D.

## Pad-steam process

Remazol dyes have limited suitability for pad-steam application.

Status: February 2003

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● **Austria/Eastern Europe**  
DyStar Bencolor Farben GmbH  
Akaziengasse 30  
Postfach 42  
1234 Vienna  
Tel.: ++43-1-699 87 17  
Fax: ++43-1-699 45 30  
DyStar.Austria@DyStar.com

● **Belgium**  
S.A. DyStar Benelux N.V.  
Avenue Louise 143  
Louizalaan  
1050 Brussels  
Tel.: ++32-2-5 35-64 70  
Fax: ++32-2-5 35-64 73  
DyStar.Benelux@DyStar.com

● **Brazil**  
DyStar Ltda.  
Rua Alexandre Dumas, 1711-2º andar  
04717-004 – Chác. Sto. Antônio  
São Paulo / SP  
Tel.: ++55-11-51 85 41 73  
Fax: ++55-11-51 85 42 24  
DyStar.Brazil@DyStar.com

● **China/Hong Kong**  
DyStar China Ltd.  
18/F, Yen Sheng Centre  
64 Hoi Yuen Road  
Kwun Tong, Hong Kong  
Tel.: ++85-2-29 55 33 88  
Fax: ++85-2-29 55 11 88  
DyStar.China@DyStar.com

● **France**  
DyStar France s.a.r.l.  
30, avenue Edouard Belin  
92566 Rueil Malmaison Cedex  
Tel.: ++33-1-41 39 12 20  
Fax: ++33-1-41 39 12 49  
DyStar.France@DyStar.com

● **Germany**  
DyStar Vertrieb D-A-CH/Nordica  
65926 Frankfurt am Main  
Tel.: ++49-69-2109-23 10  
Fax: ++49-69-2109-26 06  
DyStar.Germany@DyStar.com

● **India**  
DyStar India Private Limited  
Mumbai - Agra Road  
Balkum, Thane 400 608  
Tel.: ++91-22-25 41 09 99  
Fax: ++91-22-25 41 18 34  
DyStar.India@DyStar.com

● **Indonesia**  
PT DyStar Colours Indonesia  
Menara Global Building  
22nd Floor  
Jln. Gatot Subroto Kav. 27  
Jakarta 12930  
Tel.: ++62-21-527 05 50  
Fax: ++62-21-527 05 20  
DyStar.Indonesia@DyStar.com

● **Italy**  
DyStar Italia S.r.l.  
Via delle Groane 126  
20024 Garbagnate Milanese (MI)  
Tel.: ++39-02-99 44 01  
Fax: ++39-02-99 02 83 91  
DyStar.Italy@DyStar.com

● **Japan**  
DyStar Japan Ltd.  
7-20, Azuchimachi 1-chome,  
Chuo-ku, Osaka 541-0052  
Tel.: ++81-6-62 63 66 72  
Fax: ++81-6-62 63 66 91  
DyStar.Japan@DyStar.com

● **Korea**  
DyStar Korea Ltd.  
141-28, 10th fl.  
Dong Shin Building  
Samsung-dong, Kangnam-gu.  
P.O. Box Kangnam 537  
135-090 Seoul  
Tel.: ++82-2-34 52 78 78  
Fax: ++82-2-34 52 78 76  
DyStar.Korea@DyStar.com

● **Mexico**  
DyStar de México S.A. de C.V.  
Arenal 24 – Edificio Sur – 3er. Piso  
Col. Ed-Hda. Gpe. Chimalistac  
01050-México, D.F.  
Tel.: ++52-55-5322-51 00  
Fax: ++52-55-5662-56 18  
DyStar.Mexico@DyStar.com

● **Pakistan**  
DyStar Pakistan (Private) Limited  
Bahria Complex-II, 2F  
M. T. Khan Road  
Karachi-74000  
Tel.: ++92-21-561-18 19  
Fax: ++92-21-561-16 24  
DyStar.Pakistan@DyStar.com

● **Portugal**  
DyStar Anilinas Têxteis, Lda.  
Rua Manuel Pinto de Azevedo, 626  
4100-320 Porto  
Tel.: ++351-22-6 15 31 80  
Fax: ++351-22-6 15 31 90  
DyStar.Portugal@DyStar.com

● **Singapore**  
DyStar Singapore Pte. Ltd.  
152 Beach Road  
#37-00 The Gateway East  
Singapore 189721  
Tel.: ++65-62 98 79 22  
Fax: ++65-62 95 53 08  
DyStar.Singapore@DyStar.com

● **South Africa**  
DyStar South Africa (Pty) Ltd.  
16 Henwood Road, P.O. Box 1421  
Pinetown 3610  
Tel.: ++27-31-7 10 65 09  
Fax: ++27-31-7 09 37 32  
DyStar.SouthAfrica@DyStar.com

● **Spain**  
DyStar Hispania, S.A.  
c./Famadas, 37-57  
08907 Hospitalet de Llobregat  
Tel.: ++34-93-2 64 04 40  
Fax: ++34-93-2 64 04 58  
DyStar.Spain@DyStar.com

● **Taiwan**  
DyStar Taiwan Ltd.  
5th Fl., No. 196, Sec. 2  
Chien Kuo N. Road  
104 Taipei, Taiwan, R.O.C.  
Tel.: ++886-2-25 16 37 77  
Fax: ++886-2-25 16 81 99  
DyStar.Taiwan@DyStar.com

● **Thailand**  
DyStar Thai Ltd.  
193 Lake Rajada Building  
17th floor  
Ratchadapisek Road  
Klongtoey, Bangkok 10110  
Tel.: ++66-2-2 64 04 70  
Fax: ++66-2-2 64 04 74  
DyStar.Thai@DyStar.com

● **Turkey**  
DyStar Tekstil Boyalari  
Ticaret Limited Sirketi  
Merkez Efendi Mahallesi  
Yilanli Ayazma Sokak 14-16  
34020 Topkapi/Istanbul  
Tel.: ++90-212-482 01 00  
Fax: ++90-212-482 01 06  
DyStar.Turkey@DyStar.com

● **United Kingdom**  
DyStar UK Ltd.  
Pennine Business Park/Unit 2  
Bradley Road, Huddersfield  
West Yorkshire HD2 1RA  
Tel.: ++44-14-84 41 14 00  
Fax: ++44-14-84 41 14 01  
DyStar.UK@DyStar.com

● **USA**  
DyStar L.P.  
9844-A Southern Pine Boulevard  
Charlotte, NC 28273  
Tel.: ++1-704-561 30 00  
Fax: ++1-704-561 30 05  
DyStar.USA@DyStar.com

DyStar Textilfarben GmbH & Co. Deutschland KG  
Marketing Dyes for Cellulosics 1  
D-65926 Frankfurt am Main, Germany  
Phone: ++49 (0) 69-2109-25 05  
Fax: ++49 (0) 69-2109-20 49  
Internet: <http://www.DyStar.com>

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