

Our products and services help customers worldwide reduce costs, shorten lead times and meet quality and ecological specifications.
DyStar – Shaping success.



● **Belgium**
 DyStar Benelux
 Louizalaan 200/B132
 Avenue Louise 200/B132
 1050 Brussels/Bruxelles
 Tel.: +32-2-644 23 33
 Fax: +32-2-644 23 50
 DyStar.Benelux@DyStar.com

● **Brazil**

DyStar Indústria e Comércio de Produtos Químicos Ltda.
 Av. Eng. Luis Carlos Benini, 1645
 11ª andar, Cidade Monções
 CEP 04571-011, São Paulo / SP
 Tel.: +55-11-55 08 36 84
 Fax: +55-11-55 08 36 23
 DyStar.Brazil@DyStar.com

● **China/Hong Kong**

DyStar China Ltd
 18/E, Yan Sheng Centre
 64 Hot Yuen Road
 Kowloon, Hong Kong
 Tel.: +85-2-29 55 33 88
 Fax: +85-2-29 55 11 88
 DyStar.China@DyStar.com

● **China/Shanghai**

DyStar (Shanghai) Trading Co. Ltd
 10/E, Section 1002, Building No. 9
 99 Tian Zhou Road
 Shanghai 20023
 Tel.: +86-21-61 15 91 18
 Fax: +86-21-61 15 90 03
 DyStar.China@DyStar.com

● **France**

DyStar France s.a.r.l.
 15, rue des Entrepreneurs
 Lesault - Côte des Verts Pré^s
 97900 Marq en Barrois
 Tel.: +33-3-20 42 31 34
 Fax: +33-3-20 42 31 46
 DyStar.France@DyStar.com

● **Germany**

DyStar Textilfarben GmbH & Co. Deutschland KG
 65926 Frankfurt am Main
 Tel.: +49-69-21 09 22 36
 Fax: +49-69-21 09 26 06
 DyStar.Germany@DyStar.com

● **India**

DyStar India Private Limited
 Marwah House, Ground Floor
 Krishnalal Marwah Marg
 Sakti Vihar Road, Sakti Naka
 Andheri East, Mumbai 400 072
 Tel.: +91 22-40 34 90 00
 Fax: +91 22-40 34 90 10
 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

DyStar Textilfarben GmbH & Co. Deutschland KG

Business Development Exhaust Cellulose
 Industriepark Höchst, Building B 598
 65926 Frankfurt am Main, Germany
 Phone: + 49 (0) 69 / 21 09 - 22 59
 Fax: + 49 (0) 69 / 21 09 - 72 59
 Internet: www.DyStar.com

● **Italy**

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

● **Japan**

DyStar Japan Ltd.
 7-20, Azenhama 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.
 41, 28, 10th Fl.
 Dong Shin Building
 Seongdong-gu, Kangnam-gu,
 P.O. Box, Korea 157
 155-090 Seoul
 Tel.: +82-2-34 52 78 78
 Fax: +82-2-34 52 78 76
 DyStar.Korea@DyStar.com

● **Mexico**

DyStar de Mexico S. de R.L. de C.V.
 Av. Insurgentes Sur 1085
 Int. 501-504 Col. Guadalupe Inn
 Del Alvaro Obregón CP 01050
 México, D.F. México 06700
 Tel.: +52-55-56 62 51 00
 Fax: +52-55-56 62 51 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
 Unipessoal, Lda.
 Rua Manuel Pinto de Azevedo, 626
 4100-530 Porto
 Tel.: +351-22-6 15 31 80
 Fax: +351-22-6 15 31 90
 DyStar.Portugal@DyStar.com

● **Singapore**

DyStar Singapore Pte. Ltd.
 153 Beach Road
 #37-00 The Gateway East
 Singapore 189721
 Tel.: +65-63 90 04 44
 Fax: +65-63 95 33 08
 DyStar.Singapore@DyStar.com

● **South Africa**

DyStar Hoefme Africa (Pty) Ltd
 27 Sheffeld Road
 Williston, Pietermaritzburg, 311
 P.O. Box 1845, Pietermaritzburg, 311
 Tel.: +27-33-390 81 00
 Fax: +27-33-390 23 18
 DyStar.HoefmeAfrica@DyStar.com

● **Spain**

DyStar Hispania, S.L.
 Sociedad Unipersonal
 eFramansa, 37-57
 09007 Hospital de Llobregat
 Tel.: +34-93-2 64 04 40
 Fax: +34-93-2 64 04 58
 DyStar.Spain@DyStar.com

● **Taiwan**

DyStar Taiwan Ltd.
 9th Fl., No. 196, Sec. 2
 Chung Hsu N. Road
 104 Taipei, Taiwan, R.O.C.
 Tel.: +886-2-23 16 37 77
 Fax: +886-2-23 16 81 99
 DyStar.Taiwan@DyStar.com

● **Thailand**

DyStar Thai Ltd.
 151 Laha Rajada Building
 170 Floor
 Rajabhatpattaya Road, Khlongroeng
 Khlongroeng, Bangkok 10110
 Tel.: +66-2-3 64 04 76
 Fax: +66-2-3 64 04 74
 DyStar.Thailand@DyStar.com

● **Turkey**

DyStar Tekstil boyar ve Teknoloji Sanayi Ticaret Limited Sirketi
 Haranali Trakser Sector Belgelisi
 Akademi Bulvarı, Beyoğlu Sk. No:1, K3
 34390 Çarşıbaşı - Beşiktaş
 İstanbul / Turkey
 Tel.: +90-212-866 50 00
 Fax: +90-212-866 50 00
 DyStar.Turkey@DyStar.com

● **United Kingdom**

DyStar UK Ltd.
 Burwood Way, Hovewell Green,
 Haldon, Wex Valley, Yorkshire DK3 9BH
 Tel.: +44 14 22 31 57 20
 Fax: +44 14 22 31 57 21
 DyStar.UK@DyStar.com

● **USA**

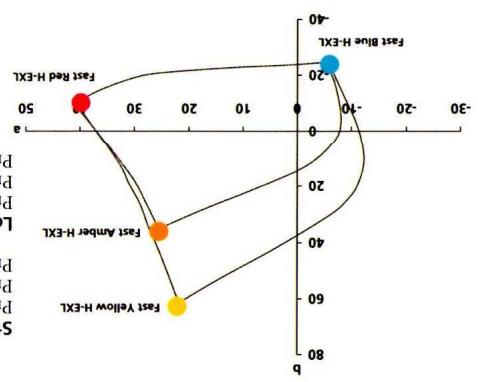
DyStar LP
 9444 A Southern Pine Boulevard
 Charlotte, NC 28273
 Tel.: +1 704-561 30 00
 Fax: +1 704-561 30 05
 DyStar.USA@DyStar.com

Procion® Fast H-EXL Procion H-EXL Procion H-E

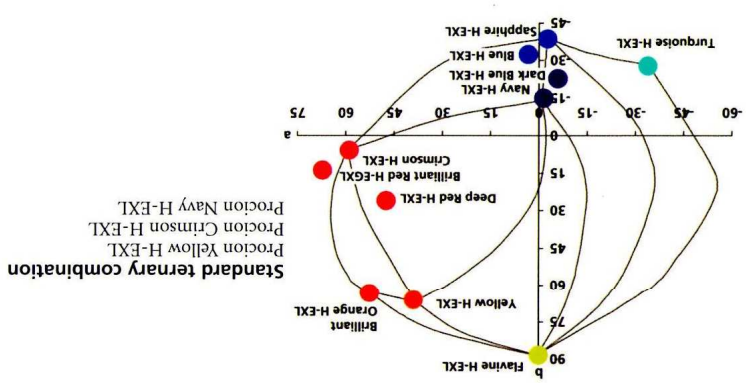
Reactive dyes for the hot dyeing segment
 Reaktivfarbstoffe für das Heißfärbesegment



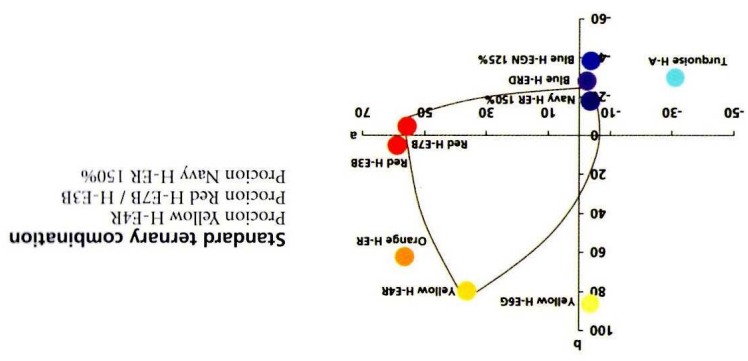
Procion Fast H-EXL
Für helle bis mittlere Töne mit höchster Lichtechtheit



Procion H-EXL
Empfehlung für mittlere bis dunkle Töne

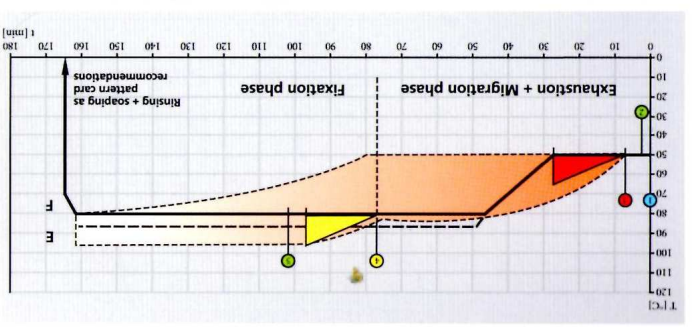


Procion H-E
Für wirtschaftliche Färbungen in medium to dark shades /
Für wirtschaftliche Färbungen in mittleren bis dunklen Tönen



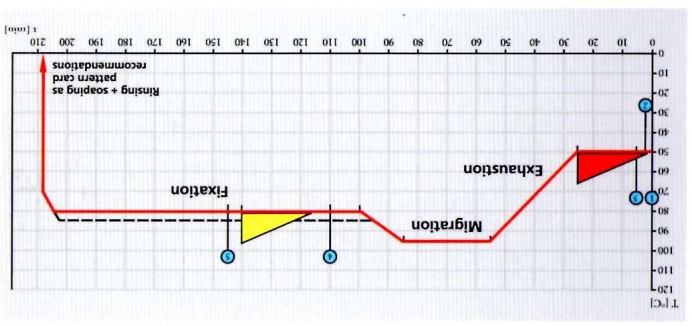
Dyeing procedure / Färbeverfahren

Standard process 80 °C / Standard-Verfahren 80 °C



1. Salt, auxiliaries / Salz, Hilfsmittel
2. Salt specific gravity, pH 5.5 – 6.5 /
Sera® Lube M-CF
Lubricant / Laufalleverhinderer:
3. Dye dosing / Farbstoffdosierung
Sera Quest M-USP
Sequestering agent / Sequestermittel:
4. Alkali dosing / Alkalidosisierung
Sera Fast C-RD or / oder
Soaping agent / Seifmittel:
5. pH 10.8 – 11.2
Sera Spense C-SN

Migration process 95 °C / Migrations-Verfahren 95 °C



1. Salt, auxiliaries / Salz, Hilfsmittel
2. Salt specific gravity, pH 5.5 – 6.5 /
Sera Lube M-CF
Lubricant / Laufalleverhinderer:
3. Dye dosing / Farbstoffdosierung
Sera Quest M-USP
Sequestering agent / Sequestermittel:
4. Alkali dosing / Alkalidosisierung
Sera Fast C-RD or / oder
Soaping agent / Seifmittel:
5. pH 10.8 – 11.2
Sera Spense C-SN

Procion

	Fast Yellow H-EXL			Fast Red H-EXL			Fast Blue H-EXL			Yellow H-EXL			Amber H-EXL			Brilliant Orange H-EXL			Brilliant Red H-EGXL			Crimson H-EXL			Deep Red H-EXL			Blue H-EXL			Sapphire H-EXL			Dark Blue H-EXL			Navy H-EXL			Yellow H-E6G		
	+	-	WO	+	-	WO	+	-	WO	+	-	WO	+	-	WO	+	-	WO	+	-	WO	+	-	WO	+	-	WO	+	-	WO	+	-	WO	+	-	WO						
I/1 S.D. % dyestuff (LR 10:1, exhaust process, bleached CO) / I/1 RTT % Farbstoff (FV 1:10, Ausziehfärhen, gebleichte Baumwolle)	3.3			3.3			1.9			1.7			2.8			1.4			2.5			2.9			1.9			4.2			3.0			4.0			6.0			4.9		
Suitability for processes / Eignung für Verfahren	+			+			+			+			+			+			+			+			+			+			+			+			+			+		
Neutral solubility (90 °C) / Neutralisierbarkeit (90 °C) in g/l	100			50			80			50			100			75			50			100			100			60			50			60			100			45		
Light fastness / Lichtechtheit (Xenotest) ISO 105-B02	4-5			4-5			5-6			5			5			3-4			4			3-4			3-4			4-5			4-5			5			3-4			3-4		
Light fastness / Lichtechtheit AATCC 16E (in I/1 S.D. / RTT)	6			5-6			5-6			5			5-6			3-4			5			4			4			5			5			5			4			4-5		
Light fastness / Lichtechtheit AATCC 16E (in I/1 S.D. / RTT)	20 h			5			5			5			5			4			4-5			4-5			4			5			4-5			4-5			3-4			4-5		
Fastness to water (severe treatment) / Wasserchtheit (schwere Beanspruchung) ISO 105-E01	5			5			4-5			4-5			4-5			5			5			4-5			4-5			5			4-5			4-5			5			4-5		
Fastness to perspiration (alkaline) / Schweisfechtheit (alkalisch) ISO 105-E04	4-5			4-5			4-5			4-5			4-5			4-5			3-4			4-5			4-5			4-5			4-5			4-5			5			4-5		
Fastness to washing 60 °C / Waschchtheit 60 °C ISO 105-C06-C3 Multifiber	5			5			5			5			5			4-5			5			4-5			5			5			5			5			5			4-5		
Oxidative multiple wash 60 °C / Oxidative Mehrfachwäsche 60 °C ISO 105-C09	4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5		
Nike perspiration light fastness (alkaline) / Nike Schweisflichtheit (alkalisch) Tested in I/1 S.D. on bleached CO / Getestet in I/1 RTT auf gebleichter Baumwolle	5			5			5			4-5			4-5			3			2-3			2-3			4-5			4-5			4-5			4-5			4			4		
Fastness to chlorinated water / Chlorbadwasserchtheit ISO 105-E03, 20 mg/l active chlorine / Aktivchlorgehalt	3-4			3			3			4			3			4			4			4-5			3-4			2			1-2			3-4			3-4			5		
Fastness to nitrogen oxides / Stickoxidchtheit ISO 105-G01	5			4-5B 4-5B			3-4G 3G			4-5			5			5			5			4			4-5			4-5			4-5			4-5			4-5			4-5		
Fastness to washing / Maschchtheit AATCC 2A (in I/1 S.D. / RTT)	4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5		
Fastness to washing / Maschchtheit AATCC 4A (in I/1 S.D. / RTT)	4-5			4-5			4-5			4-5			4-5			4-5			4-5			4-5B 4-5			4-5			4-5			4-5			4-5			4-5			4-5		

General Information

Key

- Suitability for processes
 + suitable without restriction
 - not recommended
- S = change in shade
 CO = staining of cotton
 CV = staining of viscose
 WO = staining of wool

Change of shade

- Y = yellower
 R = redder
 B = bluer
- G = greener
 D = duller
 C = clearer

Notes to fastness data

All fastness data (except Nike PLF) were evaluated in I/1 standard depth on bleached and mercerized woven cotton.
 Light fastness ISO 105-B02 was additionally tested in I/12 and I/1 standard depth on bleached and mercerized woven cotton.
 Nike perspiration light fastness was tested on I/1 S.D. bleached cotton knit.

Allgemeine Informationen

Bedeutung der verwendeten Abkürzungen



- Eignung für Verfahren
 + ohne Einschränkung geeignet
 - nicht empfohlen
- S = Farbtonänderung
 CO = Anbluten auf Baumwolle
 CV = Anbluten auf Viskose
 WO = Anbluten auf Wolle

Farbtonänderung

- Y = gelber
 R = röter
 B = blauer
- G = grüner
 D = trüber
 C = klarer

Anmerkung zu den Echtheitsdaten

Alle Echtheitsdaten (außer Nike PLF) wurden in I/1 Richttyptiefe auf gebleichtem, mercerisiertem Baumwollgewebe ermittelt.
 Die Leuchteheiten ISO 105-B02 wurden zusätzlich in I/12 und I/1 Richttyptiefe auf gebleichtem, mercerisiertem Baumwollgewebe ermittelt.
 Nike Schweißleuchteheit wurde in I/1 Richttyptiefe auf gebleichter Baumwolle ermittelt.

	Yellow H-E4R		Orange H-ER		Red H-E3B		Red H-E7B		Blue H-ERD		Blue H-EGN 125%		Turquoise H-A		Navy H-ER 150%
2.1	1.8	2.2	2.8	6.0	4.0	6.9	6.5								
+	+	+	+	+	+	+	+								
40	25	50	75	80	50	70	60								
5	3-4	4	3	5-6	4-5	4-5	3-4								
6	3-4	5	4	5-6	5	6	4								
4-5	3	4	4-5	4-5	5	5	4-5								
4-5	2	5	4	4	5	5	4								
4	4-5	4-5	5	5	4-5	4-5	4-5								
4-5	4-5	5	4-5	5	4-5	4-5	4-5								
5	5	5	5	4-5	5	4-5	5								
5	5	5	5	5	5	5	5								
4-5	4-5R	4-5	4-5	4-5	4-5	4-5	4-5								
5	3	3-4	3	3	5	4	3-4								
4-5	4	4-5	4-5	3	1-2	3	3-4								
5	5	5	2-3	2-3	2	2-3	5								
5	5	5	2	1-2	1	2	5								
4-5	4-5	4-5B	4-5	4-5	4-5R	4-5	4-5								
4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5								
4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5								
4-5	4-5R	4-5	4-5	4-5	4-5R	4-5B	4-5								
4-5	4-5	4	3-4	4	4	3-4	4-5								
4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5								

This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with our General Conditions of Sale and Delivery.