



DENAPERS[®] PS

DISPERSE DYES SUITABLE FOR
PRINTING AND
THERMOSOL DYEING
PROCESSES



DENAPERS® PS

Disperse dye range suitable for printing and thermosol dyeing processes, providing high sublimation fastness



High temperature dyes



Excellent light fastness, washing fastness and sublimation fastness



Suits for color matching with high temperature and medium temperature dyes



Good color staining fastness on cotton in polyester/cotton blended fabric



Main variety of exhaust dyeing, thermal melting pad dyeing and printing

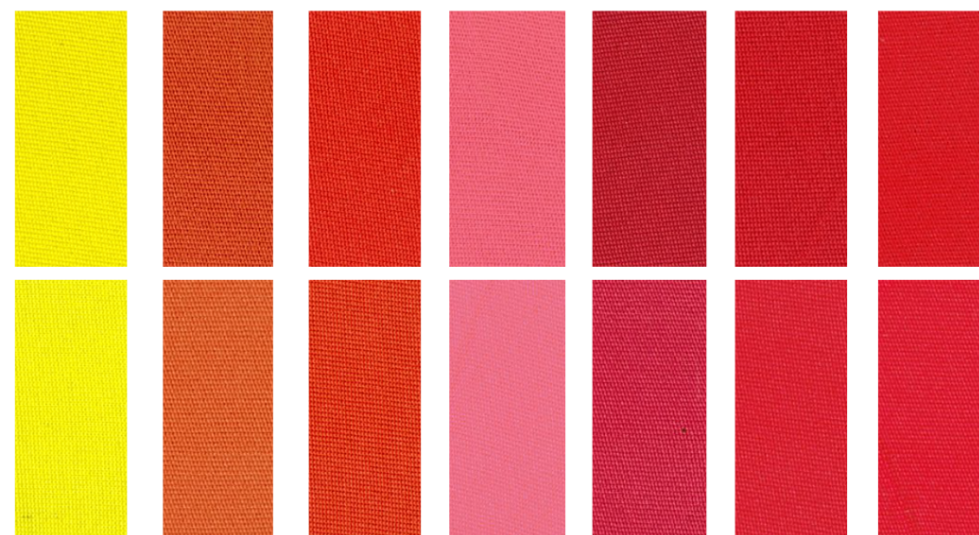
Sublimation Fastness of Dispers Dyes (ISO 105 P01)

Fastness to sublimation is probably the most important requirement of dyed polyester. The migration behavior and wet fastness of disperse dyes on polyester are closely involved with their response to heat treatments. In the table below, you can see the comparison of the sublimation fastness of the PS series to conventional disperse dyestuffs. They tested at 180°C for 30 seconds and rating is done on 1-5 grey scales.

Dye Name	Original	Staining on %100 PES Standart Fabric	CA	CO	PA	PES	PAC	W0
Denapers Yellow PS-6G %2			5	5	4/5	4/5	5	5
Conventional Yellow Mix %2			3/4	4	2/3	2/3	4/5	5
Denapers Red PS-RB %2			5	5	5	4/5	5	5
Conventional Red 73 %2			3/4	3/4	3	2/3	3/4	3/4
Denapers Navy Blue PS-G %2			5	5	5	4/5	5	5
Conventional Navy Mix %2			4/5	3	3	2	4/5	4/5
Denapers Black PS-R %2			5	5	5	4/5	5	5
Conventional Black Mix %2			3/4	2/3	2	1/2	3/4	3

DENAPERS® PS

Dye Selection



Yellow PS-6G
1.0% 2.0%

Yellow Br. PS-2R
1.0% 2.0%

Orange PS-3R
1.0% 2.0%

Red PS-BEL
1.0% 2.0%

Red PS-5B
1.0% 2.0%

Red PS-RB
1.0% 2.0%

Scarlet PS-2BL
1.0% 2.0%

C.I. Number		Yellow 114	Orange 30	Orange 80	Red 92	Red 167	Red 177	Red 152
pH Dependency		4-7	4-8	4-8	3-9	4-7	4-7	4-6
Energy Level		H	H	H	H	H	H	H
Washing Fastness	AC	4	4-5	4-5	4-5	4	4	4
	CO	5	5	5	5	4-5	4-5	4-5
	PA	4	4-5	4-5	4	4	4	4-5
	PES	5	5	5	4-5	4-5	4-5	4-5
	PAN	5	4-5	4-5	5	4-5	4-5	4
	WO	4	4	4	4	4	4	4-5
Light Fastness	1/1 SD	7	7	7	6	5-6	5-6	5
Sublimation Fastness		4-5	4	4	4-5	4-5	4-5	4
Fastness to Chlorinated Water	20 ppm	4-5	4-5	4-5	4-5	3-4	3-4	3-4
Dyeing Properties	HT	★	★	★	★	★	★	★
	Termosol	★	★	★	★	★	★	★
	Carrier	★	★	★	★	★	★	★
	Printing	★	★	★	★	★	★	★

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Dye Selection



Violet PS-3B
1.0% 2.0%

Brill Blue PS-BG
1.0% 2.0%

Blue PS-RD
1.0% 2.0%

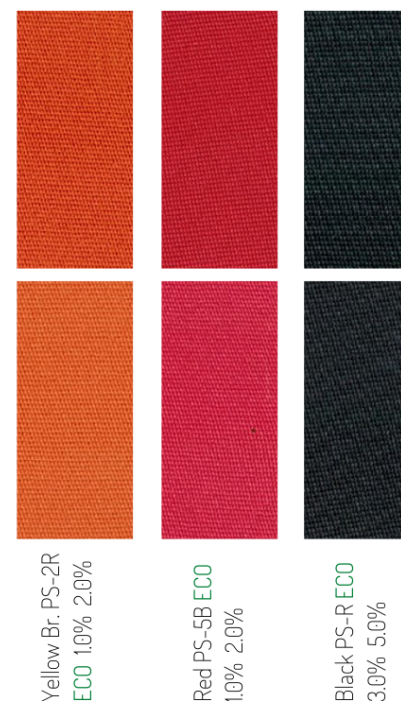
Navy Blue PS-G
1.0% 2.0%

Black PS-R
3.0% 5.0%

C.I. Number		Violet 63	Blue 60	Blue 165	Blue 79	Mix
pH Dependency		4-7	4-9	4-6	4-6	4-8
Energy Level		H	H	H	H	H
Washing Fastness	AC	4	4-5	4-5	4-5	3-4
	CO	4-5	5	5	5	4-5
	PA	4	4-5	4	4	4
	PES	4-5	5	5	4-5	4-5
	PAN	4	4-5	4-5	4-5	4-5
	WO	3	4-5	4	4-5	4
Light Fastness	1/1 SD	4-5	6-7	5-6	5	4-5
Sublimation Fastness		4	4-5	4-5	4-5	4-5
Fastness to Chlorinated Water	20 ppm	3-4	4+	4-5	3-4	4
Dyeing Properties	HT	★	★	★	★	★
	Termosol	★	★	★	★	★
	Carrier	★	★	★	★	★
	Printing	★	★	★	★	★

DENAPERS® PS -ECO Serie

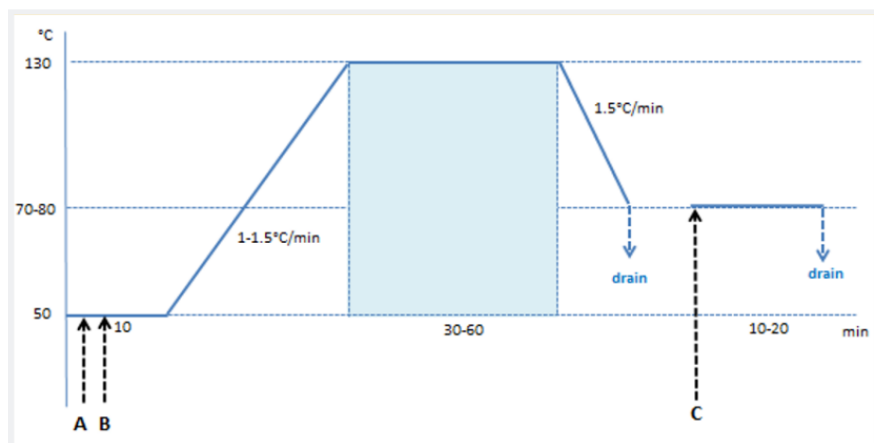
Dispers dyes with good cost-benefit-ratio that meet highest ecological standards.



C.I. Number		Orange 30	Red 167	Mix
pH Dependency		4-8	4-7	4-9
Energy Level		H	H	H
Washing Fastness	AC	4	4-5	3-4
	CO	4-5	5	4-5
	PA	4	4-5	4
	PES	4-5	5	4-5
	PAN	4	4-5	4-5
	WO	3	4-5	4
Light Fastness	1/1 SD	4-5	6-7	4-5
Sublimation Fastness		3-4	4-5	4-5
Fastness to Chlorinated Water	20 ppm	3-4	4+	4
Dyeing Properties	HT	★	★	★
	Termosol	★	★	★
	Carrier	★	★	★
	Printing	★	★	★

DYEING METHOD OF 100% POLIESTER

Dyeing temperature and dyeing time differ with the form of the material, the dye concentration and dyeing apparatus. Therefore it is important to select the suitable dyeing condition..



A	Denegal NEXT	1 g/l
	Denacid BT New	pH 4.5
B	DENAPERS PS	x g/l
C	Caustic (NaOH 38°Be)	3g/l
	Dng Clean AR	1-2g/l
20 min. at 70-80°C		



Rinse:
10 min at 70°C rinse warm, cold and drain



Neutralize:
5 min pH: 6- 6.5 neutralization with acetic acid at 50°C, 10 min rinse and drain

*Without reduction cleaning; A + B + rinse

*If reduction cleaning desired; A + B + C + rinse + neutralize

DATA ABOUT FASTNESS PROPERTIES:

The fastness properties indicated in the shade card were determined on bleached, mercerised cotton with the concentrations mentioned.

Washing Fastness	ISO 105 C06- C2S	AC= staining on acetate
Light Fastness	DIN EN ISO 105 B02	CO= staining on cotton
Sublimation Fastness	ISO 105 P01	PA= staining on polyamide 66
Fastness to Chlorined Water	ISO 105 E03	PES= staining on polyester
		PAN= staining on polyamide/elastane
		WO= staining on wool

DATA ABOUT DYEING PROCESS:

HT	High-temperature process (130 °C)
Carrier	Dyeing process at 98 – 110 °C with the addition of carriers
Thermosol	Continuous process

- suitable
- moderate
- unsuitable

The appearance of dyes can vary due to different manufacturing methods. However, this does not affect the colour on the textile or the dye properties and fastnesses. The colour intensity is normally set to 100 %.

ENERGY LEVEL:

L = low
M = medium
H = high

ECOLOGICAL INFORMATION:

The DENAPERS range fully complies with the requirements on the limits for impurities or by-products as specified in the MRSL of ZDHC (current version 2.0, December 2022, refer to www.roadmaptozero.com).



Colorful and Smart Solution

