

*High polymer surfactant/ Cotton leveling agent*

**PROTEX DS** a newest special polymer surfactant, is an outstanding auxiliary for cellulose and its blend in reactive and direct dyeing.

## PROPERTIES

Appearance	:	Brown liquid
Main component	:	Special polymer surfactant
Ionic	:	Anionic
pH	:	7.0-9.0
Solubility	:	Easily soluble in water

## FEATURES

1. **PROTEX DS** has an excellent solubility for direct and reactive dyes.
2. In reactive or direct dyeing, **PROTEX DS** has a good level dyeing property and a perfect effect to anti-bath-polluted as well.
3. Soaping with some **PROTEX DS** comes to better results and also decreases times of soaping itself.
4. Solving all the problems of leveling and reproducibility of ALL IN dyeing
5. In cheese dyeing, solving the problems of dyes solidifying and outside-to-in-side shade deviation.
6. In case of irregularity, to soap with **PROTEX DS** comes to good leveling.
7. Low formability, having no trouble in dyeing.
8. Color quality won't be affected while dyeing or soaping.

## APPLICATIONS

**PROTEX DS** effectively disperses and dissolves the dyes and controls dyeing velocity by competitive absorption. Due to characteristics of anionic surfactant formulated, its application to dyeing cotton or T/C with direct dyes, reactive dyes or vat dyes help improve leveling effects without dyeing specks and gets the perfect reproducibility of bright color on textile.



**(A) Foaming Property**

Foaming Property (Ross and Miles Method)

Foaming Property Time (Minutes)	Height of Foam (MM)			
	Instant	1	3	5
Solid Material Concentration				
0.1	3	0	0	0
0.5	5	0	0	0
1.0	15	0	0	0
2.0	25	0	0	0

**(B) Surface Tension**

Surface Tension (25°C Dunouy Method)

Solid Material Concentration (%)	Surface Tension (DYN/CM)
0.01	71.8
0.10	71.5
0.25	68.8
1.00	63.6

**RECIPE FOR EXAMPLE**

Dyes : Reactive Turquoise Blue G  
 Auxiliaries : No Addition & 2% WT into dyes  
 Temperature : 25°C

**Results**

Auxiliaries	Dyestuff Solubility (G/L)
No addition	80
<b>PROTEX DS</b>	150

**Standard Dosage**

Dyeing : (Reactive, Direct, Vat dyes) 0.5-1.5 g/l

\*Added after dyes dissolved.

Soaping : 1.0-2.0 g/l at 95°C x 20 minutes

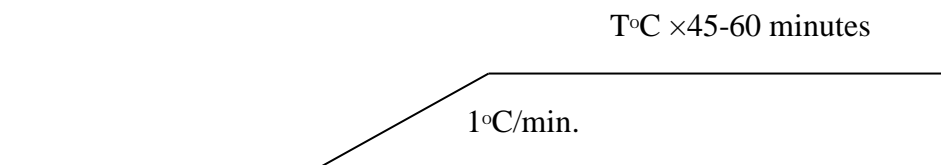
\*Used to remove the specks or to modify the color

Anti-adherence on the inside vat : Polyester 1.0-2.0 g/l

\*If the application is usual, then it is not necessary to apply intentionally

Dyestuffs will be no longer adhered to the bath.

**An instruction for easy dyeing**



Na<sub>2</sub>CO<sub>3</sub>

**PROTEX DS**

Dyes

Na<sub>2</sub>SO<sub>4</sub>

The basic construction of Dyestuff 60°C type, such as V.S. or V.S + M.C.T. Supra type is D-SO<sub>2</sub>CH<sub>2</sub>OSO<sub>3</sub>Na. In Alkaline Solution, D-SO<sub>2</sub>CH<sub>2</sub>OH-OH makes the dyestuff itself lose a hydrophilic group (-SO Na). Then the solubility of dyes is getting lower and the Glauber's salt in the bath makes the dyes irregular that are the cause of specks.

**PROTEX DS** 1-2 g/l (Dark color) added together after dyes dissolving, in addition, the easy way of ALL IN the leveling property and reproducibility are also satisfying.

The information is not to be taken as a warranty or representation for which we assume legal responsibility or as permission or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation and verification.



**SIAMPRO (THAILAND) CO., LTD.**

3056 Moo.14 SoiSantikam 8, Sukhumvit 109 Road, North Samrong, Muang, Samutprakarn. THAILAND. Tel : +66-2-7541149 Fax : +66-2-3989129 Email : info@siampro.net