# Nittobo

Fixing Agent for Reactive and Direct Dyes



DANFIX-303 is a fixing agent to improve the wet fastness of reactive and direct dyeings and printings of cellulosic fibers. In spite of its high fixing ability DANFIX-303 can be easily stripped from dyeings, if necessary.

# 1. PROPERTIES

Appearance: Light yellow clear solution

Composition: Aqueous solution of specific cationic polymers

Ionicity : Cation

pH : 4-4.5 (10g/L)

Solubility : Easily can be diluted with cold water in every ratio

# 2. CHARACTERISTICS

-Improves the fastness to water, washing and acid hydrolysis.

- -Only slight influence on the hue, the light fastness and the handle of dyeings.
- -Exhibits excellent effect on both methods, exhaustion and continuous.
- -Contains no formaldehyde.

# **3. APPLICATION**

Well rinsed dyeings are treated as follows:

(Exhaustion)

DANFIX-303: 2-6%owf, Temp.: 40-60°C (104-140° F),

Duration: 15-20min.

(Continuous)

DANFIX-303: 5-30g/L, Temp.: 20-40°C (68-104°F)

Pad the dyeings, then squeeze and dry.

#### %Stripping (Defixation)

DANFIX-303 can be easily stripped from the dteings.

-Soda ash (or Caustic soda: 30° Be): 5g/L (5cc/L)

-Nonionic penetrant (e.g. Scourol 400): 2-5cc/L

-Hydrogen peroxide (30%): 3cc/L

-Liquor ratio: 20:1

Boil at 80°C for 30min., then rinse with warm water.

# 4. FIXING EFFECT

Dyestuff	Fixing	Change	Washing			Hot water			Light	Chlorinated water	
(% owf)	agent	in hue			*1			*2		10mg/L	20mg/L
Kayarus Supra	non	_	3	2	3–4	3–4	1-2	4	4	3	3
Red BWS (1)	<b>D-303</b>	4-5	4-5	4-5	5	5	5	5	3-4	3-4	3
Kayarus Supra	non	-	3	2	3	3–4	1-2	3–4	4-5	3	2-3
Grey CGL (3)	<b>D-303</b>	4	4	4-5	5	5	5	5	4-5	4	3-4
Kayarus Supra	non	_	3–4	2-3	4–5	4	2-3	4–5	4	4	3-4
Brown GTL (1)	<b>D-303</b>	4-5	5	4	5	4-5	5	5	2-3	3	2-3
Kayarus	non	-	4–5	1	3–4	5	1-2	3–4	4-5	4	3-4
Black B160 (4)	<b>D-303</b>	4-5	5	3	5	5	5	5	4	3-4	3
Kayarus Supra	non	-	4	3	4	4	2	3	5	4-5	4
Yellow GLS (3)	<b>D–303</b>	5	5	4-5	5	5	5	5	5	4	3-4
Kayarus Turq.	non	-	2	2-3	3–4	3	1-2	2-3	4-5	3	2-3
Blue GL (1)	<b>D–303</b>	3-4	3-4	4	5	4-5	5	5	4	3	3

In \*1 and \*2; Left: Change in shade; Middle: Staining on cotton; Right: Staining on silk [Fixing conditions] DANFIX-303: 4%owf,  $40^{\circ}$ C- $20^{\circ}$ min.

[Test items]

Washing fastness: JIS-L-0844 A-4 (Soap: 5g/L, Soda ash: 2g/L; 70°C/45min.)

Hot water fastness: JIS-L-0845 (60°C/20min.)

Light fastness: JIS-L-0842 (Carbon Arc Fade-O-Meter: 20hrs)

Chlorinated water fastness: JIS-L-0884 (Available chlorine: 20mg/L, 10mg/L)

# 5. CAUTIONS IN USING

-In sufficient rinsing before fixing treatment can impair the fastness properties.

-Avoid the mixing with anionic substances. (Precipitation may occur.)

-Don't fail to preliminary tests before industrial using.

2012. Apr. 06

# Nittobo Medical Co., Ltd. Specialty Chemicals Div.

# URL http://nittobo-nmdsc.com/english.html

-Head Office: 2-4-1 Kojimachi, Chiyoda-ku, Tokyo, Japan 102-0083 Phone: +81-3-4582-5460, Fax: +81-3-3514-3769

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