UTTAM PRODUCTS

JASANI Group

JCOSOL™

Solubilized Vat Dyes

Shade Catalogue

Indigosol colour references on cotton fabric



19 shades / Paired concentration swatches

Compare each shade at its labelled concentration. Higher concentration appears on the left and lower concentration on the right.

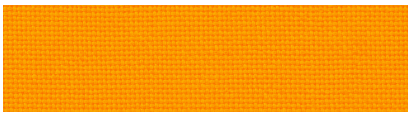
Yellows Reds and Violets • Blues Greens and Browns • Greys Earth Tones and Black

501, Maitri Heights, 5th Floor, 74, Bhaudaji Road, Matunga (CR), Mumbai - 400019, India.
M: +91-9820071477 / +91-7021151751 | T & F: +91-22-24049786
hemant@uttamproducts.com | uttamproducts.com

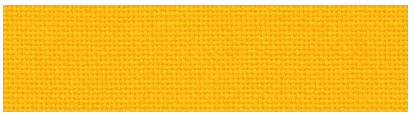
Yellows Reds and Violets

Paired shades at the concentrations indicated below each rectangle

01 JCOSOL
Golden Yellow IGK
Development 50°C

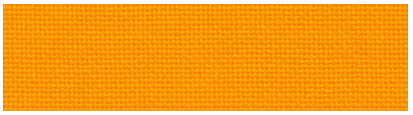


3%

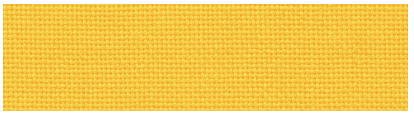


1%

02 JCOSOL
Golden Yellow IRK
Development 50°C



3%



1%

03 JCOSOL
Orange HR
Development 60°C



3%



1%

04 JCOSOL
Pink IR
Development 80°C



2%



0.5%

05 JCOSOL
Scarlet IR
Development 80°C



3%



1%

06 JCOSOL
Red Violet RF
Development 80°C



2%



0.5%

07 JCOSOL
Brill. Violet I4R
Development 40°C



2%



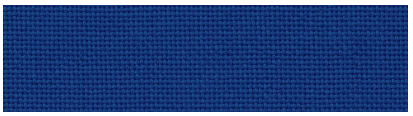
0.5%

JCOSOL Colour at a glance

Blues Greens and Browns

Paired shades at the concentrations indicated below each rectangle

08 JCOSOL
Blue O4B
Development 80°C


3%


1%

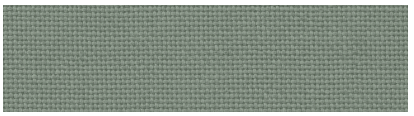
09 JCOSOL
Green IB H/Conc.
Development 40°C


3%


1%

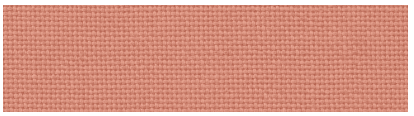
10 JCOSOL
Olive Green IB (M)
Development 60°C


3%


1%

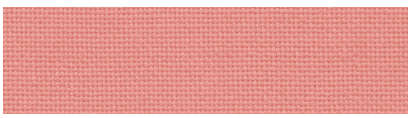
11 JCOSOL
Brown IRRD
Development 60°C


2%


0.5%

12 JCOSOL
Brown IBR (M)
Development 60°C


3%


1%

13 JCOSOL
Grey IBL (N)
Development 60°C


3%

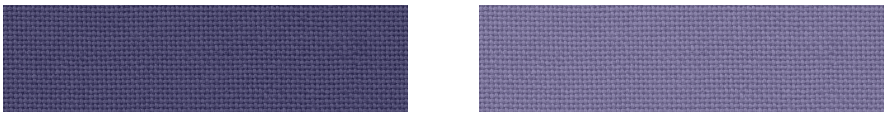

1%

JCOSOL Colour at a glance

Greys Earth Tones and Black

Paired shades at the concentrations indicated below each rectangle

14 JCOSOL
Grey I2BL
Development 80°C



15 JCOSOL
Grey IT (N)
Development 80°C



16 JCOSOL
Mustard IG
Development 65°C



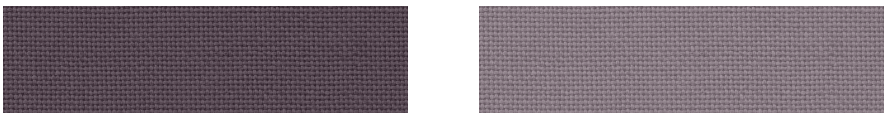
17 JCOSOL
Khakhi IM
Development 60°C



18 JCOSOL
Khakhi IGS
Development 60°C



19 JCOSOL
Black BV
Development 60°C



JCOSOL Colour at a glance

Dyeing Shades and Properties

5 g/litre colour references • 01–10

Light, washing, soda-boil and chlorine fastness with solubility and development temperature.

Shade	5 g/litre	Light	Washing	Soda boil	Chlorine	Solubility	Dev. temp.
01 Golden Yellow IGK		5-6	3-4	2-3	5	3	50°C
02 Golden Yellow IRK		6-7	3	2-3	5	4	50°C
03 Orange HR		5	4	4	4-5	4	60°C
04 Pink IR		5-6	4	3-4	5	1	80°C
05 Scarlet IR		5-6	4	3-4	5	1-5	80°C
06 Red Violet RF		5-6	3-4	2-3	5	1	80°C
07 Brill. Violet I4R		6-7	4-5	4-5	4	5	40°C
08 Blue O4B		5	3	3	3	4	80°C
09 Green IB H/Conc.		7-8	5	4-5	4	5	40°C
10 Olive Green IB (M)		5	3	2-3	3	3	60°C

JCOSOL Colour and performance at a glance

Dyeing Shades and Properties

5 g/litre colour references • 11–19

Light, washing, soda-boil and chlorine fastness with solubility and development temperature.

Shade	5 g/litre	Light	Washing	Soda boil	Chlorine	Solubility	Dev. temp.
11 Brown IRRD		6-7	4-5	4	4	2	60°C
12 Brown IBR (M)		7-8	4-5	4-5	4	4	60°C
13 Grey IBL (N)		6-7	3-4	3-4	4	3	60°C
14 Grey I2BL		5	3	3	3	2	80°C
15 Grey IT (N)		6	4	3-4	4	2	80°C
16 Mustard IG		5-6	3-4	2-3	5	3	65°C
17 Khakhi IM		6-7	4	4	4	4	60°C
18 Khakhi IGS		5-6	3	2-3	3	3-4	60°C
19 Black BV		5-6	3	2-3	3	3-4	60°C

JCOSOL Colour and performance at a glance

Without Guarantee

JCOSOL

Technical Application Guide

INDIGOSOLS

JCOSOL PRINTING AND DYEING ON COTTON TEXTILES

JCOSOL



SOLUBILISED
VAT DYES







JASANI GROUP / Uttam Products

Screen Printing with JCOSOL

On cotton fabric

For screen printing on cotton, JCOSOL dyes use Sodium Nitrite as the oxidant. The printed colour is subsequently developed with dilute Sulphuric Acid. The paste-preparation and finishing sequence below sets out the nitrite process.

Preparing the Printing Paste

The weighed dyestuff is pasted with Thiodiethylene glycol and dissolved by adding hot water. Wherever required, urea is added to get a clear solution, or the mass is heated in a water bath at 80°C to 90°C. This mass is then stirred into neutralized thickening and the required quantity of other ingredients and Sodium Nitrite is added to it. Stir well and strain.

Standard Printing Recipe

Ingredient	Quantity
Colour	X gms
Thiodiethylene Glycol	5 gms
Urea	5 gms
Soda Ash	0.2 gms
Hot Water	25 gms
Neutral Thickening	Y gms
Sodium Nitrite	S gms
Total	**100 gms**

The cloth is printed with the above recipe, dried and developed in a bath containing 20 ml/lit. Sulphuric acid (Conc.) at the recommended temperatures for one minute. Wash well and soap at boil, then wash and dry.

Protect Colour During Printing

Keep the colour and printed fabric away from bright sunlight or intense daylight during printing. Strong light may cause premature development and affect the final result.

Without Guarantee

Understanding JCOSOL Dyes

Solubilized Vat Dyes on Cotton Fabric

JCOSOL solubilized vat dyes are soluble esters of parent vat dyes. They provide light and medium shades on cotton and other cellulosic fibres with high fastness. They are also suitable for light shades on polyester/cotton blends, where their ease of application supports solid, even colour and excellent all-round fastness.

The fastness properties of JCOSOL dyes correspond to those of their respective parent vat dyes. Refer to the shade-specific values in the performance tables.

The Dyeing Sequence

There are four distinct stages in the solubilized JCOSOL dyeing process.

1. Treatment of material with JCOSOL dyestuff solution by padding or by impregnation on jigger.

2. Intermediate drying (not required for jig dyeing).

3. Development with an oxidizing agent in acid medium.

4. Rinsing and soaping.

Managing Impregnation and Salt

With JCOSOL dyes, generally the impregnation is carried out at room temperature (30°C). During the course of impregnation, it is necessary to add 25 to 100 gms/litre Glauber's salt calcined. For high-affinity dyes, the quantity of Glauber's salt may be cut down when producing light shades.

Low Affinity Shades and Brown IRRD

The following dyestuffs have very low affinity: JCOSOL Orange HR, Pink IR, Red Violet RF and Brown IRRD. In these cases, the quantity of Glauber's salt has to be increased depending on temperature and concentration of the dye bath, and usually the temperature is not allowed to fall below 40°C.

JCOSOL Brown IRRD is very sensitive to addition of salt; hence the maximum permissible Glauber's salt in this case is 25 gms/litre, and it is to be added in portions.

Exhaust Dyeing on Cotton

JCOSOL can be applied by exhaust dyeing or pad dyeing. The exhaust route includes open-beck and jigger methods; the pad route is described on the following page.

Open Beck Dyeing Method

In this method, the dye is first dissolved in warm water at 40°C.

The well-scoured material is worked in this bath for about 20 minutes. Add Glauber's salt 20 to 30 gms/litre and raise the temperature to 50°C; continue dyeing for another 20 to 25 minutes.

Drain the bath and squeeze the material uniformly. Develop the material in a fresh developing bath containing 10 to 20 gms/litre Sulphuric Acid and 4 to 6 gms/litre Sodium Nitrite.

The temperature is raised to 60°C and the dyed material is worked in the bath for about 30 to 45 minutes.

Drain the bath and wash well in water to remove acid. Neutralize with 1 gms/litre Soda Ash, and soap the material with Soap 2 gms/litre at 70 to 80°C. Finish with successive rinsing.

Jigger Dyeing Method

Usually the following sequence is followed while dyeing with JCOSOL in jigger.

Two passages through colour solution.

Two to four passages after addition of Glauber's salt (concentration 25 to 100 gms/litre).

Drain the bath and fill it with fresh water. Develop the colour by adding 10 to 20 gms/litre of concentrated Sulphuric Acid and 0.5 to 1 gms/litre Sodium Nitrite, giving four passes. Follow the development temperature indicated against each colour in the shade table.

Neutralize the acid with Soda Ash; rinse and soap.

Pad Dyeing and Colour Development

Padding Dyeing Method

Prepare the padding bath by dissolving JCOSOL dyestuffs in 900 ml hot water. Add 1 gm Soda Ash dissolved in 10 ml water, followed by 10 gms Sodium Nitrite dissolved in 50 ml water. Make the volume up to 1000 ml.

Pad the fabric in the above dye liquor and dry uniformly in a Stenter Machine.

Developing Bath

Use 5 to 20 ml/litre concentrated Sulphuric Acid, depending upon the ease of oxidation of the particular JCOSOL soluble dyes.

The following table gives a clear guideline regarding the concentration of Sodium Nitrite to be used while dyeing with JCOSOL dyes.

Dyestuff gms/litre	Sodium Nitrite JCOSOL dyes easy to develop gms/litre	Sodium Nitrite JCOSOL dyes difficult to develop gms/litre
1	5	8
2	8	10
5	10	12

Without Guarantee