

## Technical Data Sheet

### PRODUCT CHARACTERISTICS

Most of the FLSC Colours/Inks available in the market have issue of Higher formaldehyde (>300 ppm) levels which makes them unsuitable for achieving RSL Compliant Prints.

To solve this problem, Zydex has launched K2 FLSC Inks & Zycol FLSC Emulsions which will make final prints comply with RSL Standards of diff. retailers.

K2 FLSC inks are extremely resistant to bleeding during washing cycle but has formaldehyde/ Zycol FLSC colours formulated with K2 clears will ensure zero formaldehyde but may have slight bleeding tendency.

FLSC colours have poor light stability compare to normal organic pigments.

### PRODUCT RANGE

COLOUR	EMULSION	INK
Magenta	✓	✓
Orange	✓	✓
Pink	✓	✓
Rose	✓	X
Red	✓	✓
Lemon	✓	✓
Yellow	X	✓
Blue	X	✓
Green	✓	✓
Violet	✓	✓

### PRODUCT RANGE

	Application	Max. Formaldehyde level	Maximum Dose	Application guideline for RSL Compliance		
				Application Dose in recipe (%)	Formaldehyde Limit 2018 (ppm)	Formaldehyde level expected
K2 FLSC Inks	For Printing on knits/high stretch fabrics (Light Ground)	Non-compliant with respect to Formaldehyde levels (Avg. 150 ppm) except blue.	Baby Wear	<3	5	4.5
			Adults	<40	75	60
			Outer Wear	Up to 100	75	150

**Note:**

Both to be used for direct Printing on White/ Pastel Grounds/ making recipe with other colours. Use Base Coats for Blotch Printing on other grounds.

## METHODS OF USING FLSC COLOURS - K2 FLSC INKS

There are 2 methods of using FLSC Colours:

### 1. Direct Printing with K2 FLSC Colours\*

- **Without Base Coat with Inks:** Both to be used for direct printing on white/pastel grounds /making recipes with other colours.

**With White Base Coat** On Dark Grounds is recommended to achieve desire effect in colour value.

They should be printed with white as above, as these are highly transparent colours.

**For Yellow & Red Shades, it is advisable to tint the base coat with same shade as Top Coat.**

### 2. Blending /over printing to improve brightness of basic spot colours:

These colours have to be mixed with basic colours in correct combination to get desired results. Blending option guideline are given below:

Spot Colours →	Violet	Red	Marine	Scarlet	Yellow	Blue 1	Green	Blue 2
FLSC Shade for Brightness ↓								
Magenta (136**)/4*	√ (51)	√ (21)	√ (52)	√ (12)				
Lemon (113**)/7*	√ (6)	√ (13)		√ (31)	√ (16)	√ (9)	√ (19)	√ (11)
Violet (49**)/3*	√ (25)	√ (16)	√ (8)					
Pink (15**)/2*	√ (9)	√ (6)						
Orange (13**)/1*					√ (13)			
Blue (10**)/1*						√ (10)		
Green (6**)/1*							√ (6)	
Red (6**)/1*		√ (6)						

\*\* Indicates No. of recipes possible with that colour.

\*Indicates No. of basic colours in which the FLSC colour will give brightness.

## DISADVANTAGE

- **Formaldehyde level is high.**

Slight deterioration in Light Fastness is a trade off to achieve RSL Compliance in FLSC Inks. Please find below Light Fastness test results:

	Magenta	Pink	Orange	Lemon	Red	Yellow	Green	Violet	Blue
Ink	3	3	3	3-4	2-3	2	4	1-2	4

For RSL Compliance you can add Regular Pigment Emulsions/ Inks to achieve desired standard.

## FOR BRIGHTER PRINTS

Pigment Paste (%)	Zycol FLSC Emulsions (%)	Additive for achieving washing Fastness
92 to 95	6 to 8	Use 2 to 3% Formaldehyde Free Fixer (Catalyst KX) /3-5% K2 Clear/ 1-2% Catalyst 90X to achieve desired results.

We recommend addition of 2-3% White in K2 FLSC colours for Solidity.

Above recipes are guidance purpose only. Please adjust the recipe at your end as per colour depth requirement.

**Note:**

- These are subject to correct fabric quality & and application procedure.
- It is advisable to test all the parameters before bulk production.

## DISADVANTAGE

- **Tonal Variation – FLSC Emulsions**

<b>Primary products (all colours)</b>	Colour tone may vary* (lot to lot) Check before use.
<b>After Curing Curing Standards : Cure at 150°C for 3 minutes</b>	Colour tone may change after curing* in direct printing. With few colours viz. Magenta, Orange & lemon (Match Shade after curing)

### Light Fastness

	Magenta	Pink	Orange	Lemon	Red	Yellow	Green	Violet	Blue
Ink	3-4	4	3-4	3-4	-	-	-	-	N.A.

For RSL Compliance you can add Regular Pigment Emulsions/Inks to achieve desired standard.

## STORAGE STABILITY OF ZYCOL FLSC EMULSIONS

- These Colours are produced to eliminate hard settling,
- Soft settling is likely after prolonged storage, which can be mixed easily.
- After long storage, it is advisable to shake the carboy or bottle before use.

## MIXING & WEIGHING

Weighing should be done accurately with a suitable weighing Scale & Mixing should be done with Automatic Ink Mixer for Proper Mixing.

## STORAGE & SHELF LIFE

- Do not store in direct sun or at a temperature higher than 40°C.
- Always keep the lid closed after withdrawal of material from the can.
- Minimum shelf life of the product is 18-24 months.

### DISCLAIMER:

The information & data contained herein are given in good faith but without warranty. We recommend that before using our products, the customer should make his/her own tests to determine the suitability of the products for his/her own purpose under his/her operating conditions. As the circumstances under which our products are stored. Handled and used are beyond our control, we cannot assume any responsibility for their use by the customers.

# FLSC COLOURS