



MATSUI INTERNATIONAL CO. INC.

1501 WEST 178th STREET, GARDENA, CALIFORNIA 90248
(310) 767-7812 • (800) 359-5679 • FAX (310) 767-7836

PRODUCT DATA SHEET

PRODUCT IDENTIFICATION

Chromicolor® UV Screen Ink

GENERAL INFORMATION

Chromicolor® UV Screen Ink is a UV curing type silk screen ink for application to paper, polyester film and hard vinyl chloride film. With various additives its use can be extended to many other substrates.

PRODUCT SPECIFICATIONS

Colors:

New Fast Yellow
Gold Orange
Vermilion

Pink
Magenta
Fast Blue
Turquoise Blue

Brilliant Green
Fast Black
Green
Brown

Solids, theoretical:

25 %

Coverage, theoretical:

70 gms per square meter, or
1 kg = 21,500 square inches minimum

Recommended dry
Film thickness:

35 – 50 μ (depending on color[s] and
desired opacity)

Solvents:

Screen clean-up: xylol or butyl acetate
Spill clean-up: Isopropanol (IPA) or
Methylethylketone (MEK)

Properties:

Viscosity, as shipped:
BH Model Viscosimeter

<u>UV Screen Ink</u>	<u>Thinner UV</u>
32,000 cps (at 20°C)	15-30 cps (at 28°C)

Specific Gravity:

1.08 – 1.10 0.98 \pm 0.05

Flash Point:

99°C 114°C

COATING MATERIAL
PREPARATION

None necessary

VISCOSITY ADJUSTMENT

Thinner UV (5% - 15%)

SUBSTRATE PREPARATION

None necessary

Screen Plate:

Polyester monofilament of 100-120 mesh lines per inch) in bias cladding. Oil resistant emulsion should be used for photosensitive film.

Squeegee:

Should be printed with a soft squeegee.

Curing Equipment:

Mercury lamp UV irradiation equipment or metal halide lamps.

APPLICATION PROCEDURE

Standard Recipe:

Chromicolor® UV Screen Ink	100%
<u>Thinner UV</u>	<u>5 %</u>
TOTAL	105 ± (by weight)

Chromicolor® is ready to print. Chromicolor® UV Screen Clear is an optional diluent. To start with use 5% UV Screen Clear, do not exceed 15%. Cure for approximately 2 –10 seconds. A top coat is recommended to protect printed surface from scratches and abrasion. A UV Top/Clear coat or a laminate works well.

Pot life:

When Thinner UV is added, pot life is 48 hours at 30°C.

Clean up:

Xylene (xylol) solvent

SHELF LIFE, STORAGE

SAFETY, HANDLING

Shelf Life:

Shelf life of unmixed ink is three months at a temperature of 30°C. Reducing the storage temperature to 10°C extends the shelf life to six months minimum.

Shelf life of Thinner UV is 6 months at 30°C.

Storage:

Ink and components should be stored in a cool, dark place.

Safety, Handling: Do not inhale the ink fumes.
Avoid skin contact.
Protective clothing should be worn at all times when using this product (safety glasses, gloves, etc.)
FOR SPECIFICS PLEASE REFER TO MSDS.

HELPFUL HINTS

Viscosity as shipped: 20,000 – 28,000 cps at 28°C

Viscosity w. 5% Thinner UV: 10,000 – 16,000 cps at 28°C

The addition of more than 5% Thinner UV delays curing but it can be accelerated by adding a photo sensitizer such as Initiator UV.

To determine if applied Chromicolor® UV Screen Ink has been cured, measure the pencil hardness of the cured film. (Should be 3B or greater.)

Optimum irradiation curing can be obtained by using a Metal Halide Lamp with an output of 120W/cm, at a distance of 12 cm and a belt speed of ten meters per minute. A mercury lamp of equivalent output would require a slower belt speed (approx. 5 meters / minute) to achieve the same curing.

Particle size of UV Screen Ink is 10-15 microns.

Increasing the ink film thickness beyond 50 microns will increase its obliterating power and its residual color. Optimum film thickness for hiding power and residual color is approximately 50 microns.

Chromicolor® UV Screen Ink has been tested by various labs and only trace measurements of heavy metals have been detected. The product complies with CONEG Model legislation as well as other agency requirements, including TSCA. Harmonized Tariff Schedule (HTS) classification for Chromicolor UV Screen Ink and its additives are:

Chromicolor® UV Screen Ink	3215.19.0060
Chromicolor® UV Screen Ink (Fast Black)	3215.11.0060
Thinner UV	2916.12.5050
Fixer UV	2931.00.5010

Chromicolor® UV Screen ink can be modified and adapted for a wide variety of substrates as illustrated below.

	Chromicolor® UV Screen Ink	Chromicolor® UV Screen Ink with Fixer UV
Paper	X	
Polyester film	X	
Hard PVC film	X	
PE/PP		X
Glass / China		X
Polycarbonate	X	