



MATSUI INTERNATIONAL CO. INC.

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

CHROMICOLOR® TAMPO COLOR BASE

1. Summary:

Chromicolor® Tampo Color Base is color paste in which the micro encapsulated temperature sensitive color-change colorant, Chromicolor® is dispersed in high concentration and tampo ink with temperature sensitive color-change property can be prepared through using together with Tampo Clear M/ Tampo Fixer F (for metals ...die-cast cars) or Tampo Clear VC (for vinyl chloride resin moldings).

2. Kinds of Colors:

New Fast Yellow	Pink	Brilliant Green
Gold Orange	Magenta	Fast Black
Vermilion	Fast Blue	Green
	Turquoise Blue	Brown

3. Nature:

Appearance: Milky-white / Viscous paste in various colors
Composition: Chromicolor® /Polyester Group Resin /Solvent
Viscosity: 50,000 ± 10,000 cps (at 25° C)
BH Model Viscometer
Specific Gravity: 1.15 ± 0.05
Flash Point: 66° C

4. Usage:

(A) Metal Surface (Die-Cast Cars)

(1) Preparation of ink:

(I) <u>Chromicolor® Tampo Ink</u>	(Standard Recipe)
Chromicolor® Tampo Color Base	50
Tampo Clear M	32
Thinner LT	8 - 13
Thinner HT	5-10
Tampo Fixer X	2
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Total	97 - 107

* The above compounded ink should be used up within 24 hours.

Drying speed of Thinner LT is fast and HT is slow. Viscosity to be used as well as climatic drying condition should be adjusted by using those.

(II) Paint for top coat:

Tampo Clear M	50
Thinner No. 2	60
<u>Tampo Fixer X</u>	<u>2</u>
Total	112

* The above compounded paint should be used up within 12 hours. Further, depending upon your company's circumstances, it is possible to use other top coat agents instead of using the above mentioned paint for top coat.

(2) Printing Process:

- (I) After cleaning the already coated surface of die-cast cars with solvent, perform, base printing with Tampo White Ink which has been adopted by your company, if necessary.
- (II) Next, perform Tampo Printing with the above compounded Chromicolor® Tampo Ink onto the same areas, at least twice or three times. Further screen plate depth is desirable to be 25 -35 u.
- (III) After drying the relevant Tampo Ink, perform top coat for further surface protection and then heat treatment of 100-120° C x 20 minutes.

(B) Surface of Vinyl Chloride Moldings

(1) Preparation of ink

(I) Chromicolor®	(Standard Recipe)
Chromicolor® Tampo Color Base	50
Tampo Clear VC	45
Thinner LT	0 - 5
Thinner HT	0 - 5
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Total	95 - 105

* The above compounded ink should be used within 24 hours. Further necessary adjustment of viscosity and drying speed should be carried out using Thinner LT (fast drying) and HT (slow drying).

(II) Recipe of paint for top coat:

Tampo Top VC	100
Tampo Fixer F	0.5
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Total	100.5

* The above compounded paint should be used within 12 hours. Further, Tampo Fixer X should be compounded after being diluted with the same of M.E.K. beforehand.

(2) Printing Process:

- (I) After degreasing the surface of the moldings made of PVC/plasticizer with thinner, perform basic printing with Tampo Ink White for general vinyl chloride, if necessary.
- (II) Next, perform Tampo Printing with Chromicolor® Tampo Ink onto the same areas, at least two or three times. The screen plate depth is desirable to be 25 – 35 u.
- (III) After drying the relevant Tampo Ink, perform top coating by spraying for further protection of the surface. The strength will be improved if the heat treatment of 60 - 80° C x 10 minutes is performed after drying.

5. N.B. :

- (A) Chromicolor® Tampo Color Base should be sealed and stored in a refrigerator, avoiding temperatures above 40° C and moisture absorption, its shelf life is 3 months if stored below 15° C. Therefore the transportation of the relevant product needs to be done as quickly as possible.
- (B) Tampo Fixer X should be stored below 10° C, avoiding moisture absorption after being opened.
- (C) Chromicolor® Tampo Color Base tends to separate during storage, therefore it should be stirred thoroughly before use without fail.
- (D) Since Chromicolor® is slightly weak against light resistance, merchantability should be examined, taking this nature into consideration.

6. Packing Appearance:



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TAMPO CLEAR M TAMPO CLEAR VC

1. Summary:

Tampo Clear M (for metals... die-cast cars) and Tampo Clear VC (for vinyl Chloride moldings) are binders to prepare Tampo Ink with temperature sensitive color-change property or light sensitive color-change property, used with Chromicolor® Tampo Color Base or Photopia Tampo Color Base.

2. Nature:

(A) Tampo Clear M

Appearance: Colorless transparent paste
Composition: Polyester resin/solvent
Specific Gravity: 1.29 ± 0.05
Flash Point: 66.1°C

(B) Tampo Clear VC

Appearance: Colorless transparent paste
Composition: Vinyl chloride/vinyl acetate copolymer resin/solvent
Specific Gravity: 1.01 ± 0.05
Flash Point: 44°C

3. Usage:

With regard to the usage of Tampo Clear M and Tampo Clear VC, please refer to the catalog of Chromicolor® or Photopia Tampo Color Base.

4. N.B.:

(A) Both Tampo Clear M and Tampo Clear VC should be stored in a cool and dark place below 40°C .

(B) Shelf life is 6 months at the temperature of 40°C .

5. Packing Appearance:



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THINNER LT THINNER HT

1. Summary:

Thinner LT and Thinner HT are exclusive diluents for Chromicolor® or Photopia Tampo Ink and Thinner LT is a solvent of quick drying speed and Thinner HT is a solvent of slow drying speed.

2. Nature:

(Thinner LT)

Appearance:	Colorless transparent liquid
Composition:	Halogenated hydrocarbon group solvent
Specific Gravity:	1.31 ± 0.05
Flash Point:	66.1° C
Ignition Point:	648° C

(Thinner HT)

Appearance:	Pale (light) yellow transparent liquid
Composition:	Ketone group solvent
Specific Gravity:	0.92 ± 0.05
Flash Point:	96° C
Ignition Point:	462° C

3. Usage:

Regarding the usage, please kindly refer to the catalogue of Chromicolor® or Photopia Tampo Color Base.

4. Packing Appearance:



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TAMPO TOP VC

1. Summary:

Tampo Top VC is solvent type top coat agent to protect the printed articles by applying top coat with hand spray onto the printed surface with Chromicolor® or Photopia Tampo Ink over the vinyl chloride moldings and the water resistance and friction resistance, etc., of the relevant Tampo Ink can be improved.

2. Nature:

Appearance: Transparent liquid
Composition: Polyurethane resin/solvent
Specific Gravity: 0.87
Flash Point: 5.6° C
Ignition Point: 516° C

3. Usage:

Regarding the usage of Tampo Top VC, please kindly refer to the catalogue of Chromicolor® or Photopia Tampo Color Base.

4. N.B.:

- (a) Tampo Top VC should be stored in a cool and dark place below 40° C.
- (b) Shelf life is 6 months at the temperature of 40° C.
- (c) Paint added with Tampo Fixer X should be used up within 12 hours.

5. Packing Appearance:

TAMPO FIXER X

1. Summary:

Tampo Fixer F is an exclusive curing agent for Photopia Tampo Ink, Chromicolor® Tampo Ink (both of these are for metals) and Tampo Top VC (for vinyl chloride).

2. Nature:

Appearance: Transparent liquid
Composition: Polyisocyanate Resin/solvent
Specific Gravity: 1.15
Flash Point: 4° C
Ignition Point: 426° C

3. Usage:

With regard to its usage and the amount to be added, please kindly refer to the catalogue of Chromicolor® Tampo Color Base or Photopia Tampo Color Base.

4. N.B.:

(A) Tampo Fixer X changes in quality reacting through contact with moisture in the air because it is a Polyisocyanate product. Therefore it should be stored in a cool and dark place, tightly sealed without fail after use. Also avoid contact with skin and handle without inhaling it.

(B) Storage Stability: 6 months when sealed
One month after opened.
(It should be sealed without fail after use)

5. Packing Appearance: