



Thermochromic Pigments

(Color Changes from 31 to 45°C)

Thermochromic within 31°C to 45°C

■ Available Colors:

Rose, Blue, Turkey Blue, Violet

■ When heated and cooled :

Colorless : below 31°C

Colorful : 31°C to 45°C

Colorless : above 45°C

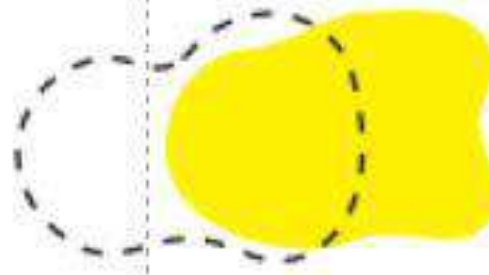
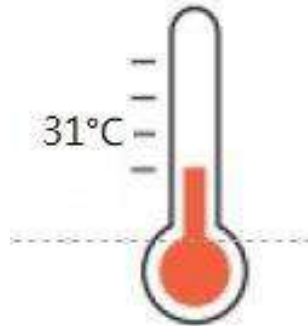


31°C

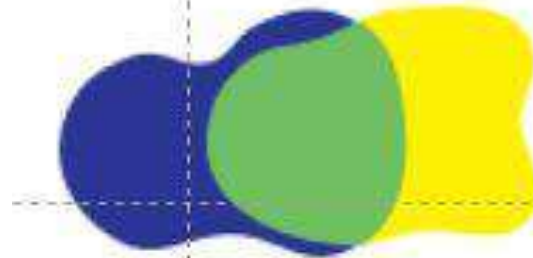
45°C

Remark: Different colors will have different color change temperature ranges

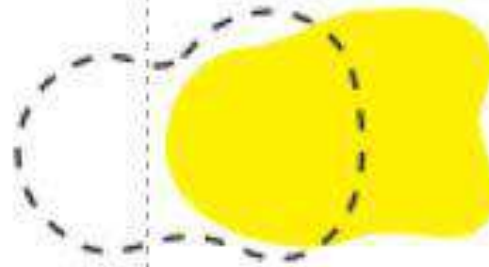
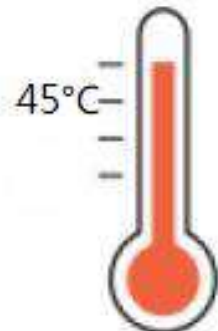
Mix With Organic Pigments



pigment becomes transparent, so mixture appears yellow



pigment mixed with yellow paint turns green



pigment becomes transparent, so mixture appears yellow

Summary

- Appears color within specified temperature range **31°C to 45°C**
- **Powder** type
- Available colors : **4**
- Heat resistance : **180 °C**

Suggested Dosage of Applications

	Screen Ink	Paint/ Coating	Hot Stamping
ThermoChromic	15-20%	15- 20%	25-30%
Binder	85-80%	85- 80%	75%

PS. In some cases, 30% dosage may be required to have bright colors.

- ThermoChromic's properties/ behaviors in ink and paint application is similar to organic pigments. ThermoChromic can be applied in both solvent and water base system.
- Pre-wetting with binder, preparing a pre-mixture, can greatly help ThermoChromic dispersion in the system.

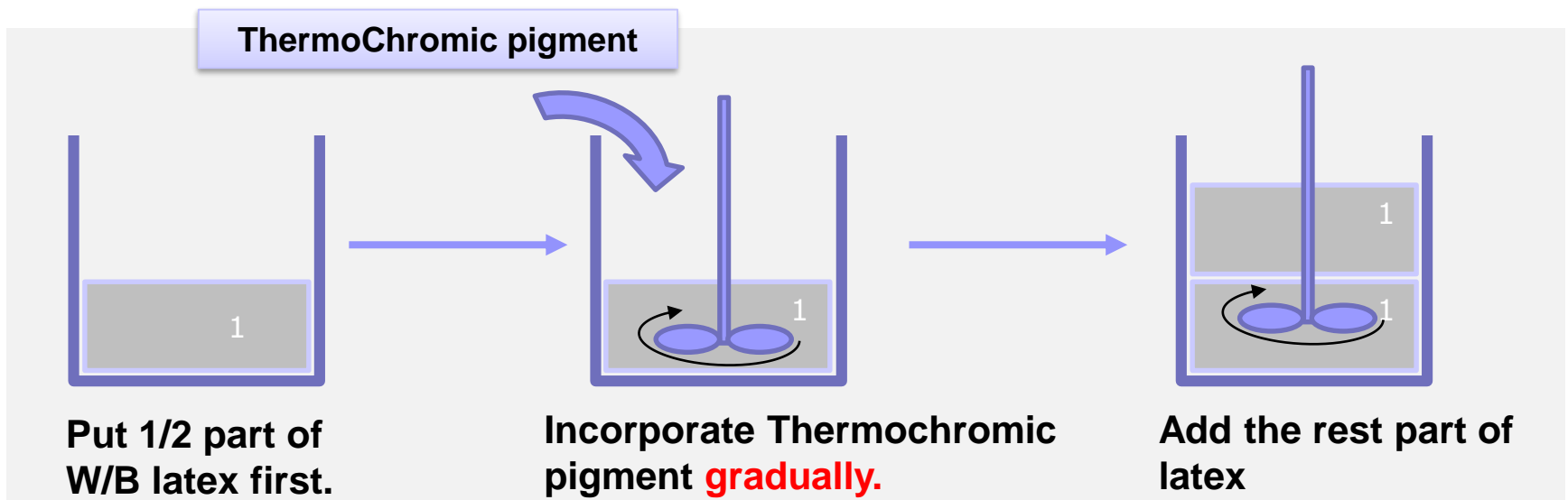
■ Incorporation process:

1. Add 1/2 part of resin.

*Well dispersion of ThermoChromic requests **high shear rate** (enough viscosity of the system).

2. Add ThermoChromic pigment into resin system **little by little**.
3. To avoid agglomeration, do NOT pour ThermoChromic pigments into resin all at once.
4. Add the rest part of resin.

In case too low viscosity and inefficient dispersion, going through three-roller-mill 1 or 2 times to have a intensively dispersing process can be helpful.



Caution for Thermochromic Application

1. Avoid using acetone and ketone solvent:

Ketone solvent damages the microcapsule shell. Please replace acetone/ ketone solvent by weaker solvent like ester.

2. The particle size distribution of Thermochromic is 1-10um.
In screen printing process, 400~450 mesh is recommended.
3. In water base printing ink application, pH value of resin system should adjust to 4~7.

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