



MATSUI INTERNATIONAL CO. INC.

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PRODUCT IDENTIFICATION

Chromicolor® PP Conc BW Grade

GENERAL INFORMATION

This product is a masterbatch (plastic resin concentrate) compounded with Chromicolor® (micro-encapsulated temperature sensitive colorant) in a polypropylene resin carrier. The boiling water resistance is improved compared to the former product.

COLOR INFORMATION

The “cold” color is the one that changes – it actually disappears at a given temperature to reveal the “hot” color which is the base color (a conventional colorant). There are ten standard “cold” colors and ten standard “hot” colors. The ten standard colors offered are:

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

(New Fast Yellow is not able to be produced in BW Grade.)

TEMPERATURE TYPE

HUE	TEMPERATURE TYPES												
	60	47	45	37	35	27	25	20	17	15	10	5	07
Gold Orange	X	X	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	Pending
Vermilion	X	X	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	Pending
Pink	X	X	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	Pending
Magenta	X	X	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	Pending
Fast Blue	X	X	OK	Pending	Pending	OK	Pending	Pending	Pending	OK	Pending	Pending	Pending
Turquoise Blue	X	X	OK	Pending	OK	OK	Pending	Pending	Pending	OK	Pending	Pending	Pending
Brilliant Green	X	X	OK	Pending	Pending	OK	Pending	Pending	Pending	OK	Pending	Pending	Pending
Fast Black	X	X	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	Pending
Green	X	X	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	Pending
Brown	X	X	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	Pending

(Types 60 and 47 are not able to be produced in BW Grade.)

Composition:

Microencapsulated Chromicolor®	18%
Polypropylene Resin	82%

Physical Properties:

Nature:	colored PP pellet
Specific Gravity:	0.91 ± 0.05
Bulk Density:	520 ± 50g/l
Flash Point	N/A
Melt Index	15-40g / 10 min. (190°C 2.15 Kgf)

Molding Procedure:

10% letdown is for most vibrant color, like the Color Chart #3. Various letdowns can be used to get lighter or brighter colors. Most customers use between 6-8%. As a general rule, the thicker the part being molded, the less Chromicolor can be used and still obtain good results. Guidelines are as follows:

<u>Wall thickness</u>	<u>% of Chromicolor</u>
> 1 mm (40 mil)	5-8%
0.8 – 1.0 mm (32 mil – 40 mil)	8-10%
< 0.8 mm (32 mil)	10-12% or more
0.375 mm (15 mil)	15%

Note: Low letdown percentage may result in decreased light fastness resistance.

Molding Temperature: The lower the molding temperature, the less damage is done towards Chromicolor®. The maximum molding temperature is 235°C (455°F). Ideal molding temperature would be around 200°C (392°F).

Pigment: Chromicolor® concentrates are compatible with other colors, except white, eg: titanium dioxide. Whites will bleach the Chromicolor® resulting in a paler shade. If adding regular pigment to Chromicolor® for a color to color effect, it should be in a paler shade than the Chromicolor® being used.

Regrind: Use of regrind may cause destruction of the capsule, so it should be avoided..

SHELF LIFE, STORAGE, SAFETY HANDLING

Shelf life:	Shelf life is unlimited when stored in dark, dry, cool conditions.
Storage:	Chromicolor® pellets require storage in a dry place. Pre-dry pellets that have been exposed to high humidity in a hopper dryer at 80°C (176°F) for two hours before use.
Packaging:	Packaged in standard 20 kg reinforced paper bags.
Lead time:	Ship from Japan within five weeks after receipt of order and payment.

GENERAL NOTES:

- 1) Chromicolor® PP Conc BW Grade is improved over Chromicolor® PP Conc in the point of boiling water resistance and color density.
- 2) BW Grade has a higher concentration of dye within the capsules compared to Chromicolor® PP Conc. Depending on the color, moldings with 1.1 - 1.25 times higher color exhibition can be obtained.
- 3) BW Grade has a finer capsule particle size compared to Chromicolor PP Conc. Therefore, hue varies slightly.
- 4) BW Grade capsules have been improved so that the color change components have difficulty leaching out of the capsule.
- 5) BW Grade can also be produced in PE, PS and AS Conc.