



# MATSUI INTERNATIONAL CO. INC.

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## PRODUCT DATA SHEET

### PRODUCT IDENTIFICATION CHROMICOLOR® CONCENTRATES

Polyethylene concentrate (PE)  
Polypropylene concentrate (PP)  
Polystyrene concentrate (PS)  
AS Concentrate  
EVA Concentrate

### GENERAL INFORMATION

Chromicolor® concentrates are specifically designed for use with low temperature injection molding, extrusion molding and vacuum forming. Chromicolor® concentrates may be used in natural or pre-colored raw materials. Once molded, the color and color change properties have excellent retention and will not bleed.

### PRODUCT SPECIFICATIONS

Chromicolor® is the “cold” color, the one that changes – it actually disappears at a given temperature to reveal the “hot” color, which is a conventional colorant added to achieve color to color change. In the event that a conventional color is not used, the Chromicolor® will reveal the base resin (natural) when hot. There are eleven standard Chromicolor® “cold” colors and unlimited “hot” colors. However, the “hot” color must be a lighter color than the “cold” colors. The colors available are:

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

Composition:

	<u>PP Conc</u>	<u>PE Conc</u>	<u>PS Conc</u>
Microencapsulated Chromicolor®	18%	18%	15%
Polypropylene resin	82%		
Polyethylene resin		82%	
Polystyrene resin			85%
<b>TOTAL (WEIGHT %)</b>	<b>100</b>	<b>100</b>	<b>100</b>

Physical Properties:

	<u>PP Conc</u>	<u>PE Conc</u>	<u>PS Conc</u>
Nature	colored PP pellet	colored PE pellet	colored PS pellet
Specific Gravity	0.90 ± 0.05	0.90 ± 0.05	0.64 ± 0.5
Bulk Density	0.50 ± 0.05	0.52 ± 0.05	0.64 ± 0.5
Flash Point	N/A	N/A	N/A

Melt Index	20-30 g/10 min. 190°C, 2.6 kgf	40-50 g/10 min. 150°C, 2.16 kgf	5-10 g/10 min. 190°C, 2.16 kgf
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## **MOLDING PROCEDURE**

Mix Ratio:

<u>Material Name</u>	<u>Chromic Conc</u>	<u>Raw Material</u>
PP, PE & PS	10%	90%
EVA Conc	9%	91%
AS Conc	12%	88%

Note: 10% 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)	20%

Molding Temperature: The lower the molding temperature, the less damage is done towards Chromicolor®. The maximum molding temperature is 235°C (455°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 lighter shade than the Chromicolor® being used.

Regrind: As much as 40% regrind may be used in plastics containing Chromicolor® without affecting the color charge properties.

### SHELF LIFE, STORAGE, SAFETY HANDLING

Shelf Life : Shelf life is unlimited if stored in cool, dry location.

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. (Dry EVA at 60°C)

Packaging : 20 kg reinforced paper bag

Lead time : Ship from Japan within four weeks after receipt of order and payment.

### ORDER INFORMATION

Please specify which concentrate you need (PP, PE, PS, etc.), “cold” color and “hot” color (refer to Color Chart #3) and temperature type when ordering.