

Reversible Thermochromic Masterbatch

Product Name: Temperature-Sensitive Color Changing Masterbatch

Product Code: SLM-TC Series

Carrier Resin: LDPE/PP/EVA (Universal Carrier)

Mechanism: Reversible Micro-encapsulated Pigment

Website: www.slmb.com

1. Product Description

SLM-TC Series is a functional masterbatch that changes color in response to temperature fluctuations. Utilizing advanced micro-encapsulation technology, the thermochromic pigments are protected during high-temperature processing. This "smart" additive is ideal for interactive consumer goods, safety indicators, and anti-counterfeiting packaging.

2. Technical Specifications

Property	Test Method	Typical Value	Unit
Activation Temperature	Custom	15°C / 31°C / 45°C (Standard)	°C
Reversibility Cycle	---	> 5,000 Cycles	Cycles
Heat Stability	---	< 230°C	°C
Light Fastness	ISO 105-B02	2 - 3 (Best for indoor use)	Grade
Pellet Size	---	2.5 ± 0.5	mm

3. Color Transformation Profiles

- Standard Profiles:** Black to Colorless; Red to Yellow; Blue to Colorless; Green to Yellow.
- Customization:** Tailored activation temperatures and color-to-color transitions are available upon request at www.slmb.com.

4. Processing Guidelines

- Processing Temp:** Keep melt temperature **below 230°C**. Excessive heat can damage the thermochromic micro-capsules and lead to loss of color-changing functionality.
- Dosage:** 3% – 6% depending on the wall thickness of the final product.
- Storage:** Store in a dark, cool place. Avoid long-term exposure to direct UV/Sunlight.

Disclaimer: The information provided above is based on our current knowledge and laboratory testing. It is intended as a general guide. Since the conditions of use are beyond our control, we recommend customers conduct their own trials before full-scale production.

For samples and customized formulations, please visit:  www.slmb.com

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