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**SAFETY DATA SHEET**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

- Product Name: Thermochromic Masterbatch
- Description  
Thermochromic master batch concentrate for use in PE, PP, PVC, PS, SAN, PC, EVA, and other.

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

- Use of the substance/mixture: Manufacture of temperature-indicating products and temperature-sensitive decorative effects.
- Manufacture of temperature sensitive color change plastics and resins. Suitable for injection molding, extrusion, compressing molding, etc.

**1.3 Details of the supplier of the safety data sheet**

- Name of Supplier: LCR Hallcrest
- Address of Manufacturer: Riverside Buildings,  
Dock Road,  
Connah's Quay,  
Deeside,  
Flintshire, CH5 4DS,  
Wales. U.K.
- Telephone: +44 (0) 1244 817107
- Email: Sales@lcrhallcrest.com

**1.4 Emergency telephone number**

- Emergency Telephone: +44 (0) 1244 818348
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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

- CLP: Not Classified

**2.2 Label elements**

- Signal Word: Not Classified
- Hazard statements  
No known significant effects or critical hazards
- Precautionary statements  
Heating during moulding will generate high levels of formaldehyde vapours which should be vented.

**2.3 Other hazards**

- No information available
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**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

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## SECTION 3: Composition/information on ingredients (....)

- Color developer  
CAS Number: Proprietary  
EC Number: Proprietary  
Concentration: 1-5%  
Categories: Skin Irrit. 2; Eye Irrit. 2; STOT SE 3
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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Contact with eyes  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Contact with skin  
IF ON SKIN: Gently wash with plenty of soap and water.
- Ingestion  
Get medical advice/attention if you feel unwell.
- Inhalation  
Plastic masterbatch is granular and as such will not represent a hazard by inhalation. When heated during moulding formaldehyde may be generated which can cause irritation, coughing and shortness of breath.

### 4.2 Most important symptoms and effects, both acute and delayed

- No information available

### 4.3 Indication of any immediate medical attention and special treatment needed

- Move the exposed person to fresh air. Seek medical attention.
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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Use as appropriate: Carbon dioxide (CO<sub>2</sub>), Dry chemical, Foam.

### 5.2 Special hazards arising from the substance or mixture

- May give off noxious and toxic fumes in a fire

### 5.3 Advice for firefighters

- Wear suitable respiratory protection
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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- Ensure adequate ventilation
- Wear protective clothing as per section 8

### 6.2 Environmental precautions

- Avoid release to the environment.

### 6.3 Methods and material for containment and cleaning up

- Collect spillage.
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## SECTION 6: Accidental release measures (....)

- Place in appropriate container

### 6.4 Reference to other sections

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing.

### 7.2 Conditions for safe storage, including any incompatibilities

- Keep container tightly closed
- Store at ambient temperature

### 7.3 Specific end use(s)

- Heating during moulding will generate high levels of formaldehyde vapours which should be vented.
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## SECTION 8: Exposure controls/personal protection



### 8.1 Control parameters

- No information available

### 8.2 Exposure controls

- Appropriate engineering controls: Ensure adequate ventilation of work place
  - Wear suitable protective clothing, including eye/face protection and gloves (PVC are recommended)
  - Wear suitable respiratory equipment when necessary. Use a respirator with multi-purpose combination (US) or type ABEK (EN 14387) as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate.
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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Appearance: Small pellets
- Colour: Various
- Odour: Very small
- Boiling point - not known
- Bulk density - not known
- Flash point - not applicable
- Insoluble in water
- Softening Point: Not available
- Vapour density - not known
- Vapour pressure - not known
- Auto-ignition point - not known

### 9.2 Other information

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## SECTION 9: Physical and chemical properties (....)

- No information available
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

- Avoid contact with: Solvents - not hazardous but will soften or damage the masterbatch.

### 10.2 Chemical stability

- Stable
- Heating during moulding will generate high levels of formaldehyde vapours which should be vented.

### 10.3 Possibility of hazardous reactions

- Heating during moulding will generate high levels of formaldehyde vapours which should be vented.

### 10.4 Conditions to avoid

- No special requirements

### 10.5 Incompatible materials

- No special requirements

### 10.6 Hazardous decomposition products

- Burning produces irritating, toxic and obnoxious fumes.
  - Formaldehyde may be generated and other harmful fumes.
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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

- Acute toxicity no information available
  - Skin corrosion / irritation : no information available
  - Serious eye damage/irritation: No data available
  - Respiratory or skin sensitisation: No data available.
  - Germ cell mutagenicity - No data is available on this product
  - IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
  - STOT-single exposure: No data is available on this product.
  - STOT-repeated exposure: No data is available on this product.
  - Aspiration hazard: No data is available on this product.
  - Repeated or prolonged exposure :No data is available on this product.
  - There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.
  - Color developer  
LD50 (oral, rat): 3400 mg/kg
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## SECTION 12: Ecological information

### 12.1 Toxicity

- No information available

### 12.2 Persistence and degradability

## SECTION 12: Ecological information (....)

- No information available
- 12.3 Bioaccumulative potential
- No information available
- 12.4 Mobility in soil
- Insoluble in water
- 12.5 Results of PBT and vPvB assessment
- No information available
- 12.6 Other adverse effects
- No information available
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## SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Not hazardous
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## SECTION 14: Transport information

Not classified as hazardous for transport

- 14.1 UN number
- UN No.: Not applicable
- 14.2 Proper Shipping Name
- Proper Shipping Name: Not applicable
- 14.3 Transport hazard class(es)
- Hazard Class: Not applicable
- 14.4 Packing group
- Packing Group: Not applicable
- 14.5 Environmental hazards
- Not Classified
- 14.6 Special precautions for user
- Not Classified
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Not Classified
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## SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

## SECTION 15: Regulatory information (....)

- COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

### 15.2 Chemical safety assessment

- A chemical safety assessment (CSA) for this product has not yet been completed
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## SECTION 16: Other information

This information supplied in this Safety Data Sheet is designed only as guidance for the safe use and storage of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information only relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

--- end of safety datasheet ---

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