

## SAFETY DATA SHEET

### Unsealed Cholesteric Liquid Crystal Mixtures

#### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	Unsealed Cholesteric Liquid Crystal Mixtures		
<b>Additional Names</b>	None		
<b>Description</b>	A mixture of unsealed liquid crystal materials.		
<b>Intended Use</b>	Manufacture of temperature-indicating products and temperature-sensitive decorative effects.		
<b>Company</b>	LCR Hallcrest 1911 Pickwick Lane Glenview IL 60026 USA		
<b>Web</b>	<a href="http://www.hallcrest.com">www.hallcrest.com</a>		
<b>Telephone</b>	+1 847 998 8580		
<b>Fax</b>	+1 847 998 6866		
<b>Email</b>	<a href="mailto:sales@hallcrest.com">sales@hallcrest.com</a>		
<b>Emergency telephone number</b>	Chemtel	Domestic:	800-255-3924
		Intl:	+01-813-248-0585

#### 2. HAZARDS IDENTIFICATION.

**GHS Classification** No significant hazard

##### GHS Label Elements

<b>Pictograms</b>	No significant hazard
<b>Signal Word</b>	No significant hazard
<b>Hazard Statements</b>	No significant hazard
<b>Precautionary Statement</b>	No significant hazard
<b>Classification 1994/45/EC</b>	No significant hazard

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous ingredients	Classification	Conc.	CAS
None	N/A	N/A	N/A

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>Skin contact</b>	May cause irritation to skin. Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist..
<b>Eye contact</b>	May cause irritation to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.
<b>Inhalation</b>	May cause irritation to mucous membranes. Move the exposed person to fresh air.
<b>Ingestion</b>	May cause irritation to mucous membranes. DO NOT INDUCE VOMITING. Seek medical attention if irritation or symptoms persist.

##### Most important symptoms and effect, both acute or delayed.

<b>Skin contact</b>	Irritation: Redness
<b>Eye contact</b>	Eye irritation: Redness
<b>Inhalation</b>	Mucus membrane irritation.
<b>Ingestion</b>	Mucus membrane irritation.

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

Treat symptomatically.

**5. FIRE FIGHTING MEASURES**

**Extinguishing Media** Use extinguishing media appropriate to the surrounding fire conditions.

**Specific hazards arising from the chemical** Burning produces irritating, toxic and obnoxious fumes.

**Special protective actions for fire-fighters** Wear suitable respiratory equipment when necessary.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, protective equipment and emergency procedures** Ensure adequate ventilation of the working area

**Environmental Precautions** Do not allow product to enter drains. Prevent further spillage if safe.

**Methods and material for containment and cleaning up** Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labeled containers for disposal. Clean spillage area thoroughly with plenty of water.

**7. HANDLING AND STORAGE**

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

**Conditions for safe storage, including incompatibilities:** Keep in cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labeled containers.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering measures** Engineering measures  
**Ensure adequate ventilation of the working area.** Ensure adequate ventilation of the working area.  
**Hand protection** Hand protection  
**Chemical resistant gloves (PVC)** Chemical resistant gloves (PVC)

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** Viscous Liquid.  
**Colors** Colorless.  
**Odor** Mild.  
**Odor threshold** N/A  
**pH** N/A  
**Melting Point/Freezing Point** No testing available.  
**Initial Boiling Point and Boiling Range** No testing available  
**Flash Point** No testing available.  
**Evaporation rate** No testing available.  
**Flammability** No testing available.  
**Upper/Lower Flammability or Explosive Limits** No testing available.  
**Vapor Pressure** No testing available.  
**Solubility** Immiscible.

**10. STABILITY AND REACTIVITY**

**Reactivity** Stable under normal conditions.  
**Chemical Stability** Stable under normal conditions.  
**Possibility of hazardous reactions** No Significant Hazard.  
**Conditions to avoid** No Significant Hazard.  
**Incompatible materials** No Significant Hazard.  
**Hazardous Decomposition Products** No Significant Hazard.

**11. TOXICOLOGICAL INFORMATION**

**Toxilogical Information**  
**No Hazardous Components**  
**Skin corrosion/irritation** No test data available

<b>Serious eye damage/irritation</b>	No test data available
<b>Respiratory or skin sensitization</b>	No test data available
<b>Germ cell mutagenicity</b>	No test data available
<b>Carcinogenicity</b>	No test data available
<b>Reproductive toxicity</b>	No test data available
<b>STOT-single exposure</b>	No test data available
<b>STOT-repeat exposure</b>	No test data available
<b>Aspiration hazard</b>	No test data available

**12. ECOLOGICAL INFORMATION**

<b>Persistence and degradability</b>	No data available
<b>Bioaccumulative potential</b>	No data available
<b>Mobility in soil</b>	No data available
<b>Other adverse effects</b>	None

**13. DISPOSAL CONSIDERATIONS**

<b>General information</b>	Dispose of in compliance with all local and national regulations.
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**14. TRANSPORT INFORMATION**

<b>UN Number</b>	This product is not classified as dangerous for carriage.
<b>UN Proper Shipping Name</b>	This product is not classified as dangerous for carriage.
<b>Transport Hazard class(es)</b>	This product is not classified as dangerous for carriage.
<b>Packing Group (if applicable)</b>	This product is not classified as dangerous for carriage.
<b>Environmental Hazards</b>	This product is not classified as dangerous for carriage.
<b>Special Precautions for the User</b>	This product is not classified as dangerous for carriage.
<b>DOT</b>	This product is not classified as dangerous for carriage.
<b>IMDG</b>	This product is not classified as dangerous for carriage.
<b>IATA</b>	This product is not classified as dangerous for carriage.

**15. REGULATORY INFORMATION**

WEE - (2002/96/EC) and RoHS Directive (2002/95/EC) our products as per attached schedule are fully compliant and do not contain any listed heavy metals, PBB or PBDE at levels exceeding 1000ppm specified in the directive. Typical levels have been measured at 1ppm or less.

**16. OTHER INFORMATION**

<b>Revision</b>	Revision 4: Formatting - Major revision to include the requirements of the HCS/HazCom 2012 Final Rule.
<b>Further information</b>	The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling 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 relates only 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.
<b>HMIS LABELLING</b>	HEALTH 0 FLAMMABILITY 0, PHYSICAL HAZARD 0. PERSONAL PROTECTION: A.