

SAFETY DATA SHEET

Unsealed Chiral Nematic Liquid Crystal Mixture

1. PRODUCT AND COMPANY IDENTIFICATION

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

2. HAZARDS IDENTIFICATION.

GHS Classification No significant hazard

GHS Label Elements

| | |
|----------------------------------|-----------------------|
| Pictograms | No significant hazard |
| Signal Word | No significant hazard |
| Hazard Statements | No significant hazard |
| Precautionary Statement | No significant hazard |
| Classification 1994/45/EC | 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

| | |
|---------------------|--|
| Skin contact | 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.. |
| Eye contact | 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. |
| Inhalation | May cause irritation to mucous membranes. Move the exposed person to fresh air. |
| Ingestion | 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.

| | |
|---------------------|--|
| Skin contact | 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.. |
| Eye contact | 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. |
| Inhalation | May cause irritation to mucous membranes. Move the exposed person to fresh air. |
| Ingestion | May cause irritation to mucous membranes. DO NOT INDUCE VOMITING. Seek medical attention if irritation or symptoms persist. |

Indication of any immediate medical attention and special treatment needed.

| | |
|---------------------|--|
| Skin contact | 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.. |
| Eye contact | 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. |
| Inhalation | May cause irritation to mucous membranes. Move the exposed person to fresh air. |
| Ingestion | May cause irritation to mucous membranes. DO NOT INDUCE VOMITING. Seek medical attention if irritation or symptoms persist. |

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 None.

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

Serious eye damage/irritation No test data available

Respiratory or skin sensitization No test data available

Germ cell mutagenicity No test data available
Carcinogenicity No test data available
Reproductive toxicity No test data available
STOT-single exposure No test data available
STOT-repeat exposure No test data available
Aspiration hazard No test data available

12. ECOLOGICAL INFORMATION

Persistence and degradability No data available
Bioaccumulative potential No data available
Mobility in soil No data available
Other adverse effects None

13. DISPOSAL CONSIDERATIONS

General information Dispose of in compliance with all local and national regulations.

14. TRANSPORT INFORMATION

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

Revision Revision 4: Formatting - Major revision to include the requirements of the HCS/HazCom 2012 Final Rule.

Further information 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.

HMIS LABELLING HEALTH 0 FLAMMABILITY 0, PHYSICAL HAZARD 0. PERSONAL PROTECTION: B.