



## SAFETY DATA SHEET

**PRODUCT: Cholesteric Liquid Crystal Mixtures**

**Issue Date: 1<sup>st</sup> May 2008**

**Version: 1**

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### 1. Product and Company identification

Product Name: Liquid Crystal Cholesteryl Ester Mixture.  
Product No: UC10, UC20, UC30, UC40, UC50, UC60.

Supplier: **LCR Hallcrest**

Address: 1820 Pickwick Lane  
Glenview  
IL 60026  
U.S.A.

Emergency Telephone No: (847) 998 8580  
Fax: (847) 998 6866

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### 2. Composition/Information on ingredients

Common Chemical Names:	CAS No:	EINECS No:
Cholesteryl Oleyl Carbonate	17110-51-9	241-179-7
Cholesteryl Nonanoate	1182-66-7	214-658-3
Cholesteryl Chloride	910-31-6	213-004-4
Butylated Hydroxytoluene	128-37-0	204-881-4

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### 3. Hazards Identification:

Adverse human health effects: May cause eye irritation  
May cause skin irritation on prolonged  
or repeated exposure  
May cause respiratory irritation on inhalation  
May cause nausea or diarrhoea if ingested

Environmental effects: Presents no particular risk to the environment,  
provided that the disposal requirements (see section 13)  
and national or local regulations are complied with

Physical and Chemical hazards: Does NOT present any particular fire hazard.  
This product is not classified as "hazardous preparation"

#### 4. First Aid measures

Inhalation:	Not specifically applicable
Skin Contact:	Rinse with plenty of water
Eye Contact:	Flush eye with water or standard eye wash solution for at least 15 minutes. Seek medical attention if irritation persists.
Ingestion:	Rinse mouth out with water Consult a doctor if necessary

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#### 5. Fire-fighting measures

Combustible, but presents no particular hazard	
Extinguishing media:	CO <sub>2</sub> foam, chemical dry powder or water spray
Equipment:	Fire and chemical resistant clothing

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#### 6. Accidental release measures

Use appropriate respirator, gloves, goggles and protective clothing  
Cover spill with Vermiculite or sand and sweep up  
Keep in a closed container for disposal  
Wash area with soap and water.

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#### 7. Handling and Storage

Handling	Handling does not require any special measures Avoid any contamination of the surrounding area
Storage	Store in tightly closed containers at normal ambient temperatures (5 – 30°C : 40 – 85°F). Protect against physical damage. <b>Do not freeze</b>
Packaging materials	
Recommended	Plastics (Polyethylene), aluminum

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## 8. Exposure control and personal protection

In accordance with good industrial practice, and in accordance with the general rules of occupational health and safety

Use standard eye protection and protective clothing

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## 9. Physical and Chemical Properties

Appearance

Physical state:	Viscous iridescent oily liquid
Colour:	See Product Certificate
Odour:	No specific odour
Clearing point	50-56 °C
Viscosity:	2500-3800 cps.
Flash point:	N/A
Specific gravity:	0.97-1.01
Evaporation rate:	< 1 (BuAc=1)
Solubility in water:	Insoluble
Solubility in organic solvents:	Miscible or soluble dependent on solvents
Percent Volatile by wt.	< 1%
Explosive properties:	Not Applicable
Oxidising properties:	Not Applicable
Auto flammability:	Not Applicable

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## 10. Stability and Reactivity

Stability	Stable under normal conditions of use
Hazardous reactions:	Not Applicable
Conditions to avoid:	Fire or excess heat. Thermal decomposition On combustion forms Carbon oxides (CO + CO <sub>2</sub> ).

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## 11. Toxicological information

Oral:	Essentially non-toxic
Dermal:	Non-toxic by dermal route
Eyes:	Maybe irritating to the eyes (temporary)
Inhalation:	N/A

Does not present any particular risk on handling under normal conditions of occupational hygiene

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## 12. Ecological information

Biodegradation:	Expected to be biodegradable
Fish Toxicity:	No data
Bacterial Toxicity:	No data

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## 13. Disposal conditions

Waste from residues:	Consult local or national laws Dispose in an approved landfill or send to a licensed treatment, storage and disposal facility.
Packaging:	Does not need cleaning prior to disposal Recycle following cleaning, or dispose of at an authorised site.

## 14. Transport information

International regulations	
UN Name	Not assigned
Sea. IMDG	Non Hazardous
Air ICAO/IATA	Non Hazardous
Road/Rail ADR/RID	Non Hazardous

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## 15. Regulatory Information

Occupational Exposure limits	N/A
R phrases	
S phrases	S3 Keep in a cool place S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S39 Wear eye/face protection S46 If swallowed seek medical advice immediately and show this container or label S56 Do not discharge into drains or the environment; dispose to an authorised waste collection point.

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## 16 Other information

Uses

Recommended uses

Toiletry/Cosmetic ingredient

This safety data sheet should be used in conjunction with technical sheets. It does not replace them.

The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than for which it was intended.

This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product.

The aim of the mandatory regulations mentioned is to help the user to fulfil his obligations regarding the use of hazardous products.

This information is not exhaustive.

This does not exonerate the user from ensuring that legal obligations, other than those mentioned, relating to the use and storage of the product, do not exist. This is solely his responsibility.