

# Safety Data Sheet

Creation date 25-Oct-2016

Revision date 27-Aug-2019

Version 2

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

Product name Molding Compound for Optical Semiconductor

Product identifier CL-CPD-AB002A

## 2. Hazards Identification

### GHS - Classification

#### Health Hazards

<u>Acute toxicity - Oral</u>	Category 5
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### Content information

#### Label elements

Symbols/Pictograms None

#### Signal Word

**Warning**

#### hazard statements

May be harmful if swallowed

### Precautionary statements

#### Precautionary Statements - Response

##### Eye contact

Immediately flush with large amounts of water for at least 15 minutes. Examination and treatment by a physician if necessary

##### Skin contact

Wash with plenty of water and soap

##### Inhalation

Call a POISON CENTER or doctor if you feel unwell

##### Ingestion

Call a POISON CENTER or doctor if you feel unwell

##### Accidental Release Measures

Rinse mouth

##### Storage

Collect spillage

##### Disposal

Store in a closed container

Store in a well-ventilated place. Keep cool

Dispose of contents/container to an approved waste disposal plant

## 3. Composition/information on Ingredients

Single Substance or Mixture Mixture

<u>Chemical name</u>	<u>CAS No.</u>	<u>Weight-%</u>
3,4-Epoxy cyclohexanecarboxylic acid (3,4-epoxycyclohexylmethyl) ester	2386-87-0	99<
Others	-	<1

\* The exact percentage (concentration) of composition has been withheld as a trade secret

## 4. First aid measures

**General advice****If inhaled**

If occurred vapor at the molding is inhaled, Remove to fresh air and keep at rest. Seek medical attention , If feel nauseous or headache

**Skin contact**

Wipe off adhering liquid and wash exposed area with lots of water and soap

**Eye contact**

If you display symptoms of rash, see your doctor immediately

Immediately flush with large amounts of water for at least 15 minutes. Examination and treatment by a physician if necessary

**Ingestion**

Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

**Most important symptoms/effects, acute and delayed** No information available

**Self-protection of the first aider**

Wear protective gloves/protective clothing/eye protection/face protection

**Note to physicians**

Treat symptomatically

For additional information, see Safety Data Sheet

**5. Fire-fighting measures****Fire extinguishing agent**

CO2 (except for Cyanides), dry chemical, dry sand, alcohol-resistant foam

**Special exposure hazards in a fire**

Fire may produce dense black smoke

**Specific extinguishing methods**

Eliminate all sources of ignition,Remain upwind during fire fighting if possible

**Special protective equipment and precautions for firefighters**

Due to poisonous gas (chlorine gas and so on) may be occurred, if needed, use Gas mask and Goggles

**6. Accidental release measures****Personal Precautions**

Wear suitable protection to avoid inhalation and contact with skin when use the product

**Environmental precautions**

Do not discharge to rivers, sewers, or drains

**Methods for Clean-Up**

Take up mechanically, placing in appropriate containers for disposal

**7. Handling and Storage****Advice on safe handling**

Use personal protective equipment as required

Avoid contact with skin, eyes or clothing

Do not eat, drink or smoke when using this product

Wash hands thoroughly after handling

Avoid contact with strong acid , strong base, and oxidizing agent

**Storage conditions**

Keep under 30 °C in closed containers and away from direct sunlight

**8. Exposure Controls/Personal Protection****Appropriate engineering controls**

Apply whole ventilation over processing areas and local ventilation on necessary place

**Control parameters**

Unset

**Personal protective equipment [PPE]****Respiratory Protection**

Wear protective masks with activated charcoal filter

**Hand protection**

Wear non-permeable gloves

**Eye protection**

Wear safety glasses with side shields (or goggles)

**Skin protection**

Wear long sleeve work shirt

**General hygiene considerations**

Do not eat, drink or smoke when using this product

**9. Physical and Chemical Properties**

<u>Physical state</u>	liquid
<u>Color</u>	Transparent
<u>Odor</u>	Feint smell of epoxy
<u>Melting point / Freezing point</u>	No data available
<u>pH</u>	No data available
<u>boiling point</u>	No data available
<u>Flammability (solid, gas)</u>	No data available
<u>Flash Point</u>	>93°C
<u>Decomposition temperature</u>	No data available
<u>Autoignition temperature</u>	No data available
<u>Explosive lower limit</u>	No data available
<u>Explosive upper limit</u>	No data available
<u>Vapor pressure</u>	No data available
<u>Vapor density</u>	No data available
<u>Specific gravity</u>	No data available
<u>Solubility</u>	Not miscible in water, miscible in Ketone
<u>Partition Coefficient (n-octanol/water)</u>	No data available
<u>Evaporation rate</u>	No data available

## 10. Stability and Reactivity

<u>Reactivity</u>	Stable at 30 °C or less
<u>Possibility of hazardous reactions</u>	May react vigorously with strong acid, strong alkali, and oxidizing agent on contact, and generate toxic gas
<u>Conditions to avoid</u>	High temperature and humidity
<u>Incompatible materials</u>	Strong acid , strong base, and oxidizing agent
<u>Hazardous decomposition products</u>	Organic gasses such as carbon monoxide and carbon dioxide, and vapours

## 11. Toxicological Information

### Information on likely routes of exposure

<u>Inhalation</u>	Avoid breathing vapors or mists
<u>Ingestion</u>	May be harmful if swallowed
<u>Skin contact</u>	No information available
<u>Eye contact</u>	No information available

Most important symptoms/effects, acute and delayed No information available

Acute Toxicity May be harmful if swallowed

### Delayed and immediate effects and also chronic effects from short- and long-term exposure

<u>Carcinogenicity</u>	No information available
<u>Target organ effects</u>	No information available
<u>Aspiration hazard</u>	No information available

### Numerical measures of toxicity (such as acute toxicity estimates)

<u>Chemical name</u>	<u>Oral LD50 ;</u>	<u>Dermal LD50</u>	<u>Inhalation LC50 - 4 hour - vapor - mg/L</u>
3,4-Epoxy cyclohexanecarboxylic acid (3,4-epoxycyclohexylmethyl) ester	= 5000 mg/kg ( Rat ) = 4490 mg/kg ( Rat )	= 20 mL/kg ( Rabbit ) = 23600 mg/kg ( Rabbit )	-

## 12. Ecological Information

<u>Toxicity</u>	No information available
<u>Persistence and degradability</u>	No information available

Bioaccumulation No information available

Mobility in soil No information available

Other adverse effects

Ozone depletion potential (ODP) No information available

### 13. Disposal Considerations

Disposal method Disposal should be in accordance with applicable regional, national and local laws and regulations

### 14. Transport Information

UN number Not Applicable

UN Proper Shipping Name Not Applicable

Transport hazard class Not Applicable

Packing group, if applicable Not Applicable

Environmental hazards (Applicable/Not applicable) Not Applicable

Special precautions in connection with transport or conveyance Be sure that tight containers with no danger of leaks used, and make certain that the containers are up with no danger of being damaged from falling and dropping Avoid direct sunlight and store indoors  
Keep away from fire

### 15. Regulatory information

Local regulation

Labor Safety and Health Act Not Applicable

Toxic Chemical Substances Control Act (Toxic Chemicals Control Act) Not Applicable

### 16. Other information

Reference LOLI(Chem ADVISOR) GHS classification data  
Raw material SDS

Creation date 25-Oct-2016

Revision date 27-Aug-2019

Version 2

Disclaimer Contents are based on documents, information and data which are available at this time, but nothing is guaranteed as regards content, physical and chemical properties, hazards  
Also precautions are subject to ordinary handling, so please take safety measures as usage in special cases

**End of Safety Data Sheet**

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The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product.

Provided by ASECL.

This document is consistent with the original.

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# Safety Data Sheet

Creation date 25-Oct-2016

Revision date 27-Aug-2019

Version 2

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

Product name Molding Compound for Optical Semiconductor

Product identifier CL-CPD-AB002B

## 2. Hazards Identification

### GHS - Classification

#### Health Hazards

<u>Acute toxicity - Oral</u>	Category 5
<u>Acute toxicity - Dermal</u>	Category 5
<u>Serious eye damage/eye irritation</u>	Category 1
<u>Respiratory sensitization</u>	Category 1
<u>Skin sensitization</u>	Category 1
<u>Aquatic environmental toxicity (acute)</u>	Category 3
<u>Chronic aquatic toxicity</u>	Category 3

### Content information

#### Label elements



### Signal Word

**Danger**

### hazard statements

May be harmful if swallowed or in contact with skin  
Causes serious eye damage  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction  
Harmful to aquatic life with long lasting effects

### Precautionary statements

#### Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray  
Wear protective gloves/protective clothing/eye protection/face protection  
In case of inadequate ventilation wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace  
Discharge into the environment must be avoided

### Precautionary Statements - Response

#### Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a POISON CENTER/doctor/appropriate source specified by manufacturer/supplier or the competent authority

<b><u>Skin contact</u></b>	Wash with plenty of water and soap If skin irritation or rash occurs: Get medical advice/attention Wash contaminated clothing before reuse
<b><u>Inhalation</u></b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing If experiencing respiratory symptoms: Call a POISON CENTER or doctor
<b><u>Ingestion</u></b>	Call a POISON CENTER or doctor if you feel unwell Rinse mouth
<b><u>Accidental Release Measures</u></b>	Collect spillage
<b><u>Storage</u></b>	Store in a closed container Store in a well-ventilated place. Keep cool
<b><u>Disposal</u></b>	Dispose of contents/container to an approved waste disposal plant

### 3. Composition/information on Ingredients

**Single Substance or Mixture** Mixture

<u>Chemical name</u>	<u>CAS No.</u>	<u>Weight-%</u>
1,3-Isobenzofurandione, hexahydro-	85-42-7	90<
Triphenyl phosphite	101-02-0	1-3
2,6-Di-tert-butyl-p-cresol	128-37-0	0.1-1.0
Others	-	<5

\* The exact percentage (concentration) of composition has been withheld as a trade secret

### 4. First aid measures

**General advice**

<b><u>If inhaled</u></b>	If occurred vapor at the molding is inhaled, Remove to fresh air and keep at rest. Seek medical attention , If feel nauseous or headache
<b><u>Skin contact</u></b>	Wipe off adhering liquid and wash exposed area with lots of water and soap If you display symptoms of rash, see your doctor immediately
<b><u>Eye contact</u></b>	Immediately flush with large amounts of water for at least 15 minutes. Examination and treatment by a physician if necessary
<b><u>Ingestion</u></b>	Call a POISON CENTER or doctor if you feel unwell Rinse mouth

**Most important symptoms/effects, acute and delayed** No information available

**Self-protection of the first aider** Wear protective gloves/protective clothing/eye protection/face protection

**Note to physicians** Treat symptomatically  
For additional information, see Safety Data Sheet

### 5. Fire-fighting measures

<b><u>Fire extinguishing agent</u></b>	CO2 (except for Cyanides), dry chemical, dry sand, alcohol-resistant foam
<b><u>Special exposure hazards in a fire</u></b>	Fire may produce dense black smoke
<b><u>Specific extinguishing methods</u></b>	Eliminate all sources of ignition,Remain upwind during fire fighting if possible
<b><u>Special protective equipment and precautions for firefighters</u></b>	Due to poisonous gas (chlorine gas and so on) may be occurred, if needed, use Gas mask and Goggles

### 6. Accidental release measures

<b><u>Personal Precautions</u></b>	Wear suitable protection to avoid inhalation and contact with skin when use the product
<b><u>Environmental precautions</u></b>	Do not discharge to rivers, sewers, or drains
<b><u>Methods for Clean-Up</u></b>	Take up mechanically, placing in appropriate containers for disposal

### 7. Handling and Storage

**Advice on safe handling** Use personal protective equipment as required  
 Avoid contact with skin, eyes or clothing  
 Do not eat, drink or smoke when using this product  
 Wash hands thoroughly after handling  
 Avoid contact with strong acid , strong base, and oxidizing agent

**Storage conditions** Keep under 30 °C in closed containers and away from direct sunlight

## 8. Exposure Controls/Personal Protection

**Appropriate engineering controls** Apply whole ventilation over processing areas and local ventilation on necessary place

**Control parameters** Unset

### **Personal protective equipment [PPE]**

**Respiratory Protection** Wear protective masks with activated charcoal filter  
**Hand protection** Wear non-permeable gloves  
**Eye protection** Wear safety glasses with side shields (or goggles)  
**Skin protection** Wear long sleeve work shirt

**General hygiene considerations** Do not eat, drink or smoke when using this product

## 9. Physical and Chemical Properties

**Physical state** liquid  
**Color** Transparent  
**Odor** Characteristic odor  
**Melting point / Freezing point** No data available  
**pH** No data available  
**boiling point** No data available  
**Flammability (solid, gas)** No data available  
**Flash Point** >93°C  
**Decomposition temperature** No data available  
**Autoignition temperature** No data available  
**Explosive lower limit** No data available  
**Explosive upper limit** No data available  
**Vapor pressure** No data available  
**Vapor density** No data available  
**Specific gravity** No data available  
**Solubility** Not miscible in water, miscible in Ketone  
**Partition Coefficient (n-octanol/water)** No data available  
**Evaporation rate** No data available

## 10. Stability and Reactivity

**Reactivity** Stable at 30 °C or less

**Possibility of hazardous reactions** May react vigorously with strong acid, strong alkali, and oxidizing agent on contact, and generate toxic gas

**Conditions to avoid** High temperature and humidity

**Incompatible materials** Strong acid , strong base, and oxidizing agent

**Hazardous decomposition products** Organic gasses such as carbon monoxide and carbon dioxide, and vapours

## 11. Toxicological Information

### **Information on likely routes of exposure**

**Inhalation** Avoid breathing vapors or mists  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
**Ingestion** May be harmful if swallowed  
**Skin contact** May cause an allergic skin reaction

**Eye contact** Severe eye irritation

**Most important symptoms/effects, acute and delayed** No information available

**Acute Toxicity** May be harmful if swallowed  
May be harmful in contact with skin

**Delayed and immediate effects and also chronic effects from short- and long-term exposure**

**Serious eye damage/eye irritation** Causes serious eye damage

**Respiratory sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical name	International Agency for Research on Cancer (IARC)
2,6-Di-tert-butyl-p-cresol	Group 3

**International Agency for Research on Cancer (IARC)** Group 3 - Not Classifiable as to its Carcinogenic

**Target organ effects** No information available

**Aspiration hazard** No information available

**Numerical measures of toxicity (such as acute toxicity estimates)**

Chemical name	Oral LD50 ;	Dermal LD50	Inhalation LC50 - 4 hour - vapor - mg/L
1,3-Isobenzofurandione, hexahydro-	= 3307 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 1.1 mg/L ( Rat ) 4 h
Triphenyl phosphite	= 1590 mg/kg ( Rat ) = 444 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 6.7 mg/L ( Rat ) 1 h
2,6-Di-tert-butyl-p-cresol	> 2930 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-

## 12. Ecological Information

**Toxicity**

**Ecotoxicity** Harmful to aquatic life with long lasting effects

Chemical name	Algae/aquatic plants	Fish	Crustacea
1,3-Isobenzofurandione, hexahydro-	95.6: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	660: 48 h <i>Leuciscus idus</i> mg/L LC50 static	103: 24 h <i>Daphnia magna</i> mg/L EC50
2,6-Di-tert-butyl-p-cresol	6: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 0.42: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	5: 48 h <i>Oryzias latipes</i> mg/L LC50	-

**Persistence and degradability** No information available

**Bioaccumulation**

Chemical name	Partition Coefficient (n-octanol/water)
1,3-Isobenzofurandione, hexahydro-Triphenyl phosphite	0.56
2,6-Di-tert-butyl-p-cresol	4.98
	4.17

**Mobility in soil** No information available

**Other adverse effects**

**Ozone depletion potential (ODP)** No information available

## 13. Disposal Considerations

**Disposal method** Disposal should be in accordance with applicable regional, national and local laws and regulations

## 14. Transport Information

**UN number** Not Applicable

**UN Proper Shipping Name** Not Applicable

**Transport hazard class** Not Applicable

<u>Packing group, if applicable</u>	Not Applicable
<u>Environmental hazards (Applicable/Not applicable)</u>	Not Applicable
<u>Special precautions in connection with transport or conveyance</u>	Be sure that tight containers with no danger of leaks used, and make certain that the containers are up with no danger of being damaged from falling and dropping Avoid direct sunlight and store indoors Keep away from fire

## 15. Regulatory information

### Local regulation

#### Labor Safety and Health Act

Complies

Chemical name	Substances with Physical and Health Hazards
1,3-Isobenzofurandione, hexahydro-	Present

#### Toxic Chemical Substances Control Act (Toxic Chemicals Control Act)

Not Applicable

## 16. Other information

### Reference

LOLI(Chem ADVISOR) GHS classification data  
Raw material SDS

### Creation date

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### Revision date

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**End of Safety Data Sheet**

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