

# Safety Data Sheet

## According to Regulation (EC) No. 1907/2006

SparkMaker

Product Name: LCD series resin

Edition:1.0  
Date Revised: 08.10.2018

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

Product Name: LCD series resin

Product Family: UV Photosensitive Resin (LCD-T/LCD-W/LCD-E/LCD-C/LCD-N/LCD-MG/LCD-H/LCD-G/  
LCD-Q)

Company: WOW Innovation Technology Co., Ltd.

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Recommended use: SLA, DLP, LCD 3D Printing technology

### **2. Hazards Identification**

According to EC Directives 1999/45/EC:

Hazards pictograms:



Xi: IRRITANT

Risk advice to man and the environment:

R36/38

Irritating to eyes and skin.

R43

May cause sensitization by skin contact.

R51/53

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

According to GHS:

Hazard pictograms



Signal Word

Warning

GHS Classification:

Skin corrosion/irritation (Category 2)

Serious eye damage/eye irritation (Category 2B)

Respiratory or skin sensitization - skin sensitization (Category 1)

Hazardous to the aquatic environment - chronic aquatic toxicity (Category 3)

Hazard Statements:

H315

Causes skin irritation.

H317

May cause an allergic skin reaction.

H320

Causes eye irritation.

H412

Harmful to aquatic life with long lasting effects.

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### Precautionary Statements: **Prevention**

P264 Wash skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

### **Response**

P285 In case of inadequate ventilation wear respiratory protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P332 + P313 If skin irritation occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P342 + P31 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
P362 Take off contaminated clothing and wash before reuse.  
P391 Collect spillage.

### **Storage**

P403+P235 Store in a well-ventilated place. Keep cool.

### **Disposal**

P501 Dispose of contents/container to comply with national or local regulations.

## **3. Composition/Information on Ingredients**

Chemical Nature:  Substance  Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]	Classification (67/548/EEC)	Classification ((EC) No 1272/2008)
Acrylated monomers	/	0-50	Xi, Xn, R22, R41, R43, R48	H302, H317, H318, H373
Acrylate-Oligomers	/	10-50	Xi, R36	
Ingredient determined not to be hazardous		to 100		

For the full text of the R phrases mentioned in this Section, see Section 16.

## **4. First Aid Measures**

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General:	In all cases of doubt, when symptoms persist, seek medical attention. <b>NEVER GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS PERSON.</b>
Inhalation:	Remove to fresh air, keep patient warm and at rest. If unconscious, place in recovery position and seek medical advice.
Skin contact:	Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleanser. <b>DO NOT USE SOLVENTS OR THINNERS.</b>
Eye contact:	Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice.
Ingestion:	If accidentally swallowed, obtain immediate medical attention. Keep at rest. <b>DO NOT INDUCE VOMITING.</b>

### **5. Fire-Fighting Measures**

Extinguishing Media:	
- suitable:	Alcohol resistant foam, CO <sub>2</sub> , powders, water spray.
- unsuitable:	Water jet
Exposure hazards:	Fire may produce dense smoke. Exposure to decomposition products may cause a health hazard.
Protective equipment for firefighters:	Appropriate breathing apparatus may be required.
Advice:	Cool closed containers exposed to fire with water. Do not allow run off from fire fighting to enter drains or water courses.

### **6. Accidental Release Measures**

Personal Precautions:	Exclude sources of ignition and ventilate the area. Avoid breathing vapors or dusts. See the production measures mentioned in sections 7 and 8.
Environmental Precautions:	If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.
Methods for cleaning-up:	Contain and collect spillage with <b>non-combustible</b> absorbent materials (e.g. sand, earth, vermiculite,...) and place in container for disposal according to local regulations (see section 13). Do not allow to enter drains or water courses. Clean preferably with a detergent - Avoid use of solvents.

### **7. Handling and Storage**

Handling:	Before any handling, see sections 3 - 8 - 11. Persons with a history of skin sensitization problems should not be employed in any process in which this preparation is
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used.

Avoid skin and eye contact. Avoid inhalation of vapor or dust.

Smoking, eating and drinking should be prohibited in application area. For personal protection, see section 8.

Never use pressure to empty: container is not a pressure vessel. Always keep in containers of same materials as the original one. Comply with the health and safety at work laws.

Precaution to be taken in Storage: Stable under recommended storage and handling conditions. Avoid exposure to temperatures higher than 40°C. Avoid strong UV sources. Avoid prolonged exposure to light. Avoid free radicals producing initiators, peroxides. Store in a dark, well ventilated and cool place in tightly closed containers in order to avoid uncontrollable polymerization or hardening. No smoking. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### **8. Exposure Controls/Personal Protection**

Exposure Limits Contains no substances with occupational exposure limit values.

Technical measures/precautions: Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction.

Protective Measures:

- Respiratory Protection: No particular measures.
- Hand Protection: Wear appropriate protective gloves. Protect grease can protect unexposed skin in advance, but invalid to exposed skin. As the products are chemicals mixture. The durability of the gloves material can't be calculated in advance. So the gloves should be test before use. Please clean immediately after contact with skin.
- Eye Protection: Use safety eyewear designed to protect against splash of liquids. Avoid contact lenses.
- Skin and Body Protection: Wear appropriate work clothing.

### **9. Physical and Chemical Properties**

Form: Liquid/viscous

Color: Typical

Odor: Typical

Melting point/range: Not applicable

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Boiling point:	Not applicable
Relative density:	Not applicable
Flash point:	>100°C
Flammability:	Not applicable
Self-ignition temperature:	Not applicable
Oxidizing properties:	Not applicable
Water solubility:	immiscible
Vapor pressure:	< 110 K Pa at 50 °C
Partition coefficient:	Not applicable
Viscosity, kinematic:	>= 7 mm <sup>2</sup> /s at 40 °C

### **10. Stability and Reactivity**

Stability:	Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid:	This preparation contains materials which are unstable under the following conditions: Exposure to temperatures higher than 40°C; - To strong UV sources; – Prolonged exposure to light. These could cause the product to polymerise exothermically.
Materials to avoid:	Heat; strong UV sources; prolonged exposure to light.

### **11. Toxicological Information**

There are no data available on the preparation itself. The components of the preparation present some known toxicological risks:

Acute toxic:	This information is not available.
Skin corrosion/irritation:	May result in irritation symptoms such as redness, blistering, dermatitis, etc.
Serious eye damage/eye irritation:	The liquid splashed in the eyes may cause irritation.
Respiratory or skin sensitization:	May cause allergic skin reactions.
Germ cell mutagenicity assessment:	Contains no ingredient listed as a mutagen.
Carcinogenicity assessment:	Contains no ingredient listed as a carcinogen.
Reproductive toxicity assessment:	Contains no ingredient listed as toxic to reproductive no data available.
STOT-Single exposure:	No data available.
STOT-repeated exposure:	No data available.
Aspiration toxicity:	May cause respiratory irritation and cause allergic reaction.
Further information:	Acrylic components of the preparation have irritating properties. Prolonged or repeated contacts with the skin or mucous membranes may result in irritation symptoms such as redness, blistering, dermatitis, etc. Cases of allergic skin reactions have been observed. The inhalation of aerial droplets or aerosols may cause

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irritation of the respiratory tracts.

### **12. Ecological Information**

There are no data available on the preparation itself.

Do not empty into drains or watercourses.

Waste and emptied containers must be disposed in accordance with local regulations.

### **13. Disposal Considerations**

Waste from residue/unused products:

Residual chemical should be disposed by incineration or by other modes of disposal in compliance with local legislation.

Contaminated packaging:

Contaminated, empty containers must be disposed of as chemical waste. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

### **14. Transport Information**

Special precautions with respect to transport:

Not applicable.

Transport Railway and Road:

Not restricted.

Transport Air:

Not restricted.

Transport Sea:

Not restricted.

Storage and Transport

Store in cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from oxidizing agents. Ensure containers are in good condition and properly sealed.

### **15. Regulatory Information**

#### **National regulatory information**

**International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors** : Neither banned nor restricted

**REACH – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)** : Neither banned nor restricted

**Candidate List of Substances of Very High Concern for Authorisation** : This product does not contain substances of very high concern.

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### **16. Other Information**

Further information:	This data sheet was prepared in accordance with Regulation (EC) No. 1907/2006.
For the full text of the R phrases mentioned in Section 3:	
Xi	Irritant.
Xn	Harmful.
N	Dangerous for the environment
R22	Harmful if swallowed.
R36/38	Irritating to eyes and skin.
R36/37/38	Irritating to eyes, respiratory system and skin.
R41	Risk of serious damage to the eyes.
R43	May cause sensitization by skin contact.
R48	Danger of serious damage to health by prolonged exposure.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### **Edition description:**

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This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulations. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should therefore not be construed as guaranteeing specific properties.