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Safety data sheet: Blue Cast X10 LCD/DLP

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1. PRODUCT IDENTIFIER

Trade name:	Blue Cast X10 LCD/DLP
Description:	Photopolymer resin for LCD/DLP 3D printers for direct investment casting of jewelry/ acrylic paint for UV cure for figurines

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Application of the substance / the preparation:	Resin for LCD/DLP 3D printers / UV curable paint for figurines

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier:	BlueCast Corso Italia, 25 Verdello 24049 BG Italy +39 3483391300 +39 035 52 93 098

1.4. EMERGENCY TELEPHONE NUMBER

Emergency telephone number:	+39 3483391300 +39 035 52 93 098

SECTION 2. HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to regulation (EC) No 1272/2008

GHS08 health hazard

Repr. 2 H361f Suspected of damaging fertility.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects

Classification according to directive 67/548/EEC or directive 1999/45/EC

Xn: Harmful

R62: Possible risk of impaired fertility.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Repr. Cat.3

Information concerning particular hazards for human health and environment: Not applicable.

Classification system: The product is classified in accordance with the latest EU regulations and state-of-the art knowledge in the industry.

2.2. LABEL ELEMENTS

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms:

Signal word: Warning

Hazard – determining component of labelling:

Diphenyl(2,4,6-trimethylbenzoyl)phosphinoxid

Hazard statements:

H361f Suspected of damaging fertility.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P281 Use personal protective equipment as required.

P273 Avoid release to environment.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information: For the wording of the listed risk phrases refer to section 16.

Result of PBT and vPvB assessment: Not applicable.

PBT: Not applicable.

vPvB: Not applicable.

2.3. OTHER HAZARDS

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

Name	CAS	Content
Methacrylate oligomers	reserved (non-toxic oligomers)	10/70%
Polyols	reserved (non-toxic polyols)	10/70%
Photoinitiators	75980-60-8	0,1/5%

3.2. MIXTURES

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SECTION 4. FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

General information:	Immediately remove any clothing soiled by the product. Seek medical attention immediately.
After inhalation:	In case of accidental inhalation of monomers provide fresh air, rest and warmth. Supply fresh air and contact your doctor. In case of unconsciousness place the patient in a stable side position for transportation.
After skin contact:	Immediately wash with water and soap and rinse thoroughly. Avoid contact with UV and sunlight.
After eye contact:	Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing:	Call a doctor immediately. Rinse out mouth and then drink plenty of water.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No further relevant information available.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No further relevant information available.

SECTION 5. FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media:	Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.
Extinguishing agents unsuitable for safety reasons:	water with full jet

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

In case of fire, the following can be released: CO_2.

5.3. ADVICE FOR FIREFIGHTERS

Protective equipment:	Wear self-contained respiratory protective device. Wear fully protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Ensure adequate ventilation/exhaustion at the workplace.
Keep people at a distance and stay on the windward side.

6.2. ENVIRONMENTAL PRECAUTIONS

Inform respective authorities in case of seepage into water course or sewage system.
Do not to allow to enter sewers / surface or ground water.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Dispose contaminated material as waste according to item 13.

6.4. REFERENCE TO OTHER SECTIONS

See SECTION 7 for information on safe handling.

See SECTION 8 for information on personal protection equipment.

See SECTION 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Advice on safe handling

Ensure good ventilation at the workplace.
Open and handle receptacle with care.
Protect from dust.

Information about fire and explosion protection:

Keep ignition sources away – Do not smoke.
Protect from heat.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage:

Requirements to be met by storerooms and receptacles: no special requirements.

Information about storage in one common storage facility: not required.

Further information about storage conditions:

Store in cool, dry condition in well-sealed receptacles.
Protect from heat and direct sunlight.
Store receptacle in a well-ventilated area.
Store under lock and key or with access restricted to technical experts or their assistants only.
Do not expose to temperature above 60 Celsius.

7.3. SPECIFIC END USE(S)

No further relevant information available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: no further data; see item 7.

8.1. CONTROL PARAMETERS

Ingredients with limit values that require monitoring at the workplace: not required.

Additional information: The lists valid during the making of this document were used as basis.

8.2. EXPOSURE CONTROLS

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered too when handling chemicals.
Keep away from foodstuffs, beverages, and feed.
Wash hands before breaks and at the end of work.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device.
In case of intensive or longer exposure use self- contained respiratory protective device.
Respirator must be worn if exposed to dust.

Protection of hands:

Protective gloves

Material of gloves

Products without solvents added: wear nitrile gloves.
Replace gloves immediately when a puncture or any change in appearance (dimension, color, flexibility etc.) is noticed.

Penetration time of glove material

The exact break through time has to be found out by manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

Goggles recommended during refilling

Body protection:

Impervious protective clothing

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	
Physical state:	Liquid
Color:	Transparent Blue
Odor:	Characteristic acrylic
Odor threshold:	Not determined
pH:	Not determined
Melting point/freezing point:	18-25° C
Initial boiling point and boiling range:	Undetermined
Flash point:	> 100° C [212° F]
Evaporation rate:	Not applicable
Flammability:	Product is not flammable.
Upper/lower flammability or explosive limits:	Not determined
Vapor pressure:	Not applicable
Vapor density:	Not applicable
Bulk density at 20° C:	1.08 g/cm^3
Relative density:	Not determined
Solubility:	>300 g/L (Miscibility with water at 20° C)
Partition coefficient: n-octanol/water:	Not determined
Auto-ignition temperature:	Product is not self-igniting.
Decomposition temperature:	> 250°C
Viscosity:	Not applicable
Explosive properties:	Not explosive
Oxidizing properties:	Not determined

9.2. OTHER INFORMATION

No further relevant information available.

SECTION 10. STABILITY AND REACTIVITY

10.1. REACTIVITY

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10.2. CHEMICAL STABILITY

Thermal decomposition / conditions to be avoided:
Do not expose to temperatures above 60 Celsius.
No decomposition if used and stored according to specifications.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reactions known.

10.4. CONDITIONS TO AVOID

No further relevant information available.

10.5. INCOMPATIBLE MATERIALS

Incompatible with acids and bases.
Avoid moisture.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

No dangerous decomposition products known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity:	
Primary irritant effect:	
Irritation of skin	OECD 404 Skin irritation, 0.04 (rabbit) (PII 0-8)
Irritation of eyes	OECD 405 Eye irritation, 2.2 (rabbit) (PII 0-13)
Skin corrosion/irritation:	Based on available data, the classification criteria are not met.
Serious eye damage/irritation:	Causes serious eye irritation.
Respiratory or skin sensitization:	No sensitizing effect known.
CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):	Based on available data, the classification criteria are not met.

SECTION 12. ECOLOGICAL INFORMATION

12.1. TOXICITY

Aquatic toxicity: No further relevant information available.

12.2. PERSISTENCE AND DEGRADABILITY

No further relevant information available.

12.3. BIOACCUMULATIVE POTENTIAL

No further relevant information available.

12.4. MOBILITY IN SOIL

No further relevant information available.
Ecotoxical effects:
Remark: Harmful to fish

Additional ecological information:
General notes:
Water hazard class 2(German Regulation) (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

PBT: Not applicable.
VPvB: Not applicable.

12.6. OTHER ADVERSE EFFECTS

No further relevant information available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Recommendation:

Can be incinerated, when in compliance with local regulations.

European waste catalogue

08 01 99	wastes not otherwise specified

Uncleaned packaging:
Recommendation:

Must be disposed of in accordance with official regulations.

Packaging may be reused or recycled after cleaning.

SECTION 14. TRANSPORT INFORMATION

14.1 UN NUMBER

ADR, AND, IMDG, IATA: Void

14.2 UN PROPER SHIPPING NAME

ADR, AND, IMDG, IATA: Void

14.3 TRANSPORT HAZARD CLASS(ES)

ADR, AND, IMDG, IATA: Void

14.4 PACKING GROUP

ADR, AND, IMDG, IATA: Void

14.5 ENVIRONMENTAL HAZARDS

Marine pollutant: No

14.6 SPECIAL PRECAUTIONS FOR USER

Not applicable.

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL AND THE IBC CODE

Not applicable.
UN "Model Regulation": -

SECTION 15. REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

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15.2. CHEMICAL SAFETY ASSESSMENT

A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION

The herein information is based on the current state of our knowledge and is intended to describe the product with regard to the requirements of safety. It should not be taken to imply any guarantee of a particular or general specification. It is the responsibility of the user of the product to ensure to his satisfaction that the product is suitable for the intended purpose and method to use. We do not accept responsibility for any harm caused by the use of this information. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use. In all cases, our general conditions of sale are applied.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the international transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the international Carriage of Dangerous Goods by Road)

IMDG: International Air Transport Association

GHS: Globally Harmonized System of Classification and labelling of chemicals

CAS: Chemical Abstracts Service (division of the American Chemical society)

*Data compared to the previous version altered.

Further Information:

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

End of Safety Data Sheet