

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name/designation Photopolymer EC 500 (included EC500, EC500M)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Sector of uses [SU]

Light curing resin for EnvisionTec's family Computer Aided Modeling Devices

1.3 Details of the supplier of the safety data sheet

Importer/Only Representative

Envisiontec GmbH

Brusseler str., 51

Germany-D 45968 Gladbeck

P.O. Box:

Telephone: +49204398750

E-mail: info@envisiontec.com

Information telephone: +49204398750

www.envisiontec.com

1.4 Emergency telephone number

This number is serviced during office hours.

SECTION 2: Hazards identification

Hazards description

Hazard designation:

This article doesn't contain dangerous substances or preparations intended to be released under normal or reasonably foreseeable conditions of use.

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

health hazards

Skin Irrit. 2

hazard statements for health hazards

H315 Causes skin irritation.

health hazards

Eye Irrit. 2

hazard statements for health hazards

H319 Causes serious eye irritation.

health hazards

Skin Sens. 1

hazard statements for health hazards

H317 May cause an allergic skin reaction.

Environmental hazards

Aquatic Acute 3

hazard statements for environmental hazards

H412 Harmful to aquatic life with long lasting effects.

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

Additional information

No information available for acute dermal and inhalative toxicity

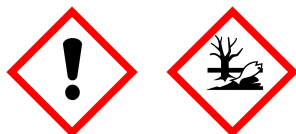
2.2 Label elements

Hazard components for labelling

Phosphine oxide

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



GHS07

GHS09

Signal word

Warning

Hazard statements

hazard statements for health hazards

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

Hazard statements for environmental hazards:

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

General:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Disposal:

P501 Dispose of contents/container to industrial incineration plant.

Product identifiers

Phosphine oxide

2.3 Other hazards

Other adverse effects

People who suffer from skins problems, asthma, allergies, chronic or recurring respiratory illnesses must not be deployed in processes, which use this substance. Process vapours can irritate airways, skin and eyes.

SECTION 3: Composition / information on ingredients

remark

Full text of H- and EUH-statements: see section 16.

3.1/3.2 Substances/Mixtures

Hazardous ingredients

Methacrylated oligomer	50 - 90 %
Skin Irrit. 2, H315 / Eye Irrit. 2, H319	
Methacrylated monomer	5 - 40 %
Skin Irrit. 2, H315 / Eye Irrit. 2, H319	
Wax	5 - 30 %
Skin Irrit. 2, H315 / Eye Irrit. 2, H319	
Phosphine oxide	1 - 2 %
Skin Sens. 1, H317 / Aquatic Chronic 4, H413	

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Change contaminated, saturated clothing.

Following inhalation

In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still. If breathing is irregular or stopped, administer artificial respiration.

Following skin contact

Wash immediately with:

Water and soap

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

If swallowed, immediately drink:

Water. Induce vomiting when the affected person is not unconscious.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

No symptoms known up to now.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

Additional information

The product itself is not combustible. In case of fire and/or explosion do not breathe fumes.

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂)

Dry extinguishing powder.

Foam

Water spray

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Special protective equipment for firefighters

In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Personal precautions

Wear personal protection equipment. Remove all sources of ignition.

For emergency responders

Personal protection equipment

Use appropriate respiratory protection.

6.2 Environmental precautions

Do not empty into drains or the aquatic environment.

6.3 Methods and material for containment and cleaning up

For containment

Suitable material for taking up

Absorbing material, organic

Sand

For cleaning up

Suitable material for diluting or neutralizing

Water

6.4 Reference to other sections

No data available

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing. Wash contaminated clothing prior to re-use. Wash hands before breaks and after work.

Provide eye shower and label its location conspicuously

Protective measures

Advices on safe handling

Avoid:

Skin contact

Eye contact

Always close containers tightly after the removal of product.

Measures to prevent fire

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Environmental precautions

See section 8.

7.2 Conditions for safe storage, including any incompatibilities

Hints on joint storage

Materials to avoid

Materials to avoid

Oxidising agent

Strong alkali

Alcohols

Reducing agent

Storage class

No storage class

Further information on storage conditions

Keep only in the original container in a cool, well-ventilated place. Protect containers against damage.

Protect against:

UV-radiation/sunlight.

storage temperature 10 - 40 °C

7.3 Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

No data available

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Suitable eye protection

Eye glasses with side protection

goggles

Skin protection

Suitable gloves type

Disposable gloves

Suitable material

NBR (Nitrile rubber)

Body protection

Suitable protective clothing

Lab apron. Lab coat.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state

liquid

Colour

dark yellow

Odour

Acrylate

		parameter	Method - source - remark
pH	6.8 - 7.2	Temperature 25 °C	
Melting point/freezing point			not determined
Initial boiling point and boiling range	>100 °C		
Flash point (°C)	>100 °C		
Evaporation rate			not determined
flammability			not determined
Upper explosion limit			not determined
lower explosion limit			not determined
Vapour pressure	0.0015 mm Hg	Temperature 25 °C	
Vapour density			not determined
Density	1.06 - 1.1 g/cm ³	Temperature 25 °C	
Fat solubility (g/L)			not determined
Water solubility (g/L)			not determined
Soluble (g/L) in			Isopropyl alcohol: Soluble in:
Soluble (g/L) in			Insoluble in:
Partition coefficient: n-octanol/water			not determined
Auto-ignition temperature			not determined
Decomposition temperature			not determined
Dynamic viscosity	300 - 600 mPa*s	Temperature 25 °C	
flow time			not determined
Kinematic viscosity			not determined

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

In case of light influence:

Danger of polymerisation

10.5 Incompatible materials

Materials to avoid

Reacts with :

Oxidizing agents. Reducing agents. Peroxides.

Radical former

10.6 Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

Carbon dioxide

Carbon monoxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute dermal toxicity

ingredient Phosphine oxide

Acute dermal toxicity >2000 mg/kg

Effective dose

LD50:

Species:

Rat

Method

OECD 402

Acute oral toxicity

ingredient Phosphine oxide

Acute oral toxicity >2000 mg/kg

Effective dose

LD50:

Species:

Rat

Method

OECD 401

Eye damage/irritation

In vitro eye test

slightly irritant

Species:

Rabbit.

Respiratory or skin sensitisation

Skin sensitisation

Assessment/classification

May cause sensitization by inhalation and skin contact.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

ingredient Phosphine oxide

Acute (short-term) fish toxicity >90 mg/L

Effective dose

LC50:

Test duration 96 h

species

Brachydanio rerio (zebra-fish)

Method

OECD 203

Acute (short-term) toxicity to crustacea

ingredient Phosphine oxide

Acute (short-term) toxicity to crustacea >1175 mg/L

Effective dose

EC50

Test duration 48 h

species

Daphnia magna (Big water flea)

Method

OECD 202

Acute (short-term) toxicity to aquatic algae and cyanobacteria

ingredient Phosphine oxide

Acute (short-term) toxicity to aquatic algae and cyanobacteria >=260 mg/L

Effective dose

EC50

Test duration 72 h

species

Desmodesmus subspicatus.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

Assessment/classification

not readily biodegradable (according to OECD criteria)

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Waste disposal according to official state regulations.

Appropriate disposal / Package

Handle contaminated packaging in the same way as the substance itself.

Waste code packaging 070208

hazardous waste Yes.

Waste name

other still bottoms and reaction residues

Waste code product 070208

hazardous waste Yes.

Waste name

other still bottoms and reaction residues

SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN-No.	not applicable	not applicable	not applicable
14.2 Proper Shipping Name			
14.3 Class(es)			
14.4 Packing group			
14.5 ENVIRONMENTALLY HAZARDOUS			
14.6 Special precautions for user			
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			

Additional information - Land transport (ADR/RID)

remark

Not a hazardous material with respect to these transportation regulations.

Additional information - Air transport (ICAO-TI / IATA-DGR)

remark

Not a hazardous material with respect to these transportation regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Further details

TSCA Inventory list: All individual components of the product are listed on TSCA

OSHA Hazards: Skin sensitizer/irritant

SARA 302: No chemicals in this material are subject to reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazard Categories: Acute Health Hazard and Reactive Hazard

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65 Components: This product does not contain chemicals at levels greater or equal to 0.1 wt% which are known to the state of California to cause cancer.

Pennsylvania Right to Know Components: No components are subject to Pennsylvania Right to Know Act

New Jersey Right to Know Components: No components are subject to the New Jersey Right to Know Act.

15.2 Chemical Safety Assessment

Irritant

SECTION 16: Other information

Additional information

Observe labels and safety data sheets for chemicals used in processing. Notice the directions for use on the label.

Relevant R-, H- and EUH-phrases (Number and full text)

H317 May cause an allergic skin reaction.

H413 May cause long lasting harmful effects to aquatic life.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Key literature references and sources for data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.