

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

### 1.1 Product identifier

#### Identification on the label/Trade name

#### label designation/Name of product

Photopolymer E-Poxy Part A

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

#### Relevant identified uses

##### remark

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

Telephone: +49204398750

Telefax: +492043987599

E-mail: info@envisiontec.com

Information telephone: +49204398750

www.envisiontec.com

### 1.4 Emergency telephone number

This number is serviced during office hours.

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## 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

#### Additional information

No information available for acute dermal and inhalative toxicity

#### 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

Skin Sens. 1

##### hazard statements for health hazards

H317 May cause an allergic skin reaction.

##### health hazards

Eye Irrit. 2

##### hazard statements for health hazards

H319 Causes serious eye irritation.

##### Environmental hazards

Aquatic Chronic 2

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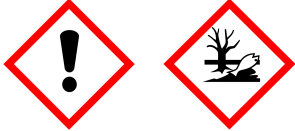
## hazard statements for environmental hazards

H411 Toxic to aquatic life with long lasting effects.

## 2.2 Label elements

### 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

H411 Toxic 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.

P273 Avoid release to the environment.

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

##### Response:

P302 + P352 IF ON SKIN: Wash with plenty of water/.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

##### Disposal:

P501 Dispose of contents/container to .

## 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.

## SECTION 3: Composition / information on ingredients

### 3.1/3.2 Substances/Mixtures

#### Hazardous ingredients

7,7,9-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecan-1,16-diol 10 - 45 %  
dimethacrylate

CAS 72869-86-4

Skin Irrit. 2, H315 / Eye Irrit. 2, H319

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Acrylated oligomer CAS Proprietary Skin Sens. 1, H317 / Aquatic Chronic 3, H412	15 - 35 %
Epoxy resin CAS 25068-38-6 Skin Irrit. 2, H315 / Skin Sens. 1, H317 / Eye Irrit. 2, H319 / Aquatic Chronic 2, H411	15 - 30 %
Methacrylated oligomer CAS Proprietary Skin Irrit. 2, H315 / Skin Sens. 1, H317 / Eye Irrit. 2, H319	15 - 20 %
Acrylic resin CAS Proprietary Eye Irrit. 2, H319 / Aquatic Chronic 2, H411	10 - 15 %
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide CAS 162881-26-7 EC 423-340-5 Skin Sens. 1, H317 / Aquatic Chronic 4, H413	0.1 - 2 %

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## 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

After contact with skin, wash immediately with plenty of water and soap.

#### After eye contact

In case of contact with eyes, rinse immediately thoroughly with plenty of water and consult an ophthalmologist.

#### Following ingestion

Do not induce vomiting. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Symptoms

No known symptoms to date.

### 4.3 Indication of any immediate medical attention and special treatment needed

#### Special treatment

Treat symptomatically.

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## SECTION 5: Firefighting measures

### Additional information

The product itself is not combustible. In case of fire and/or explosion do not breathe fumes. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### 5.1 Extinguishing media

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>)

Dry extinguishing powder  
Foam.

### **Unsuitable extinguishing media**

Full water jet

## **5.2 Special hazards arising from the substance or mixture**

### **Hazardous combustion products**

Can be released in case of fire:

Carbon monoxide

Carbon dioxide (CO<sub>2</sub>).

## **5.3 Advice for firefighters**

### **Special protective equipment for firefighters**

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

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## **SECTION 6: Accidental release measures**

### **Additional information**

Eliminate leaks immediately. Clear spills immediately.

## **6.1 Personal precautions, protective equipment and emergency procedures**

### **For non-emergency personnel**

#### **Personal precautions**

Provide adequate ventilation. 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 allow to enter into surface water or drains.

## **6.3 Methods and material for containment and cleaning up**

### **For containment**

#### **Suitable material for taking up**

Absorbing material, organic

Sand

Chemical binding agents, containing acids

## **6.4 Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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## **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 immediately. Wash contaminated clothing prior to re-use. Wash hands before breaks and after work.

Provide eye shower and label its location conspicuously

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## Protective measures

### Advices on safe handling

Do not breathe gas/fumes/vapour/spray.

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. Take precautionary measures against static discharges. When using do not smoke.

## 7.2 Conditions for safe storage, including any incompatibilities

### Requirements for storage rooms and vessels

Keep/Store only in original container. Keep container tightly closed.

### Hints on joint storage

### Materials to avoid

Oxidising agent

Reducing agent

Strong alkali

Alcohols.

### Further information on storage conditions

Keep container tightly closed in a cool, well-ventilated place. Protect containers against damage. UV-radiation/sunlight.

## 7.3 Specific end use(s)

### Recommendation

Observe technical data sheet.

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## 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)

Butyl rubber.

##### Unsuitable material

NR (natural rubber, natural latex)

##### Body protection

##### Suitable protective clothing

Lab apron. Lab coat.

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## Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.  
Respiratory protection necessary at:  
insufficient ventilation.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

#### Physical state

liquid

#### Colour

transparent  
yellow

#### Odour

Acrylate.

	parameter	Method - source - remark
Evaporation rate		not determined
Melting point/freezing point		not determined
Boiling point or initial boiling point and boiling range	>100 °C	
flammability		not determined
Upper explosion limit		not determined
lower explosion limit		not determined
Flash point (°C)	>150 °C	
Auto-ignition temperature		not determined
Decomposition temperature		not determined
pH	6.8 - 7.2	Temperature 25 °C
Soluble (g/L) in		Isopropanol
Fat solubility		not determined
Water solubility		The study does not need to be conducted because the substance is known to be insoluble in water.
Partition coefficient: n-octanol/water		not determined
Vapour pressure		not determined
Vapour density		not determined
Relative density	1.05 - 1.12 g/cm <sup>3</sup>	Temperature 25 °C
particle characteristics		not determined
Dynamic viscosity	1000 - 1500 mPa*s	Temperature 30 °C
flow time		not determined

parameter	Method - source - remark
Kinematic viscosity	not determined

## 9.2 Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No hazardous reaction when handled and stored according to provisions.

### 10.2 Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3 Possibility of hazardous reactions

Danger of polymerisation  
with heat evolution in presence of radical forming substances, reducing agents, and/or heavy metals ions.

### 10.4 Conditions to avoid

In case of light influence:  
Danger of polymerisation  
Can polymerize with intensive heat release.

### 10.5 Incompatible materials

#### Materials to avoid

Oxidising agent  
Reducing agent  
Radical former  
Peroxides  
Acid  
Alkali (lye)  
Heavy metals.

### 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

### Additional information

Product has not been tested. The statement is derived from properties of the components.

### 11.1 Information on toxicological effects

#### Acute toxicity

#### Acute dermal toxicity

**ingredient** 7,7,9-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecan-1,16-diol dimethacrylate

**Acute dermal toxicity** >2000 mg/kg

#### Effective dose

LD50:

#### Species:

Rabbit

#### Method

OECD 402

**ingredient** Acrylated oligomer

**Acute dermal toxicity** >2000 mg/kg

**Effective dose**

LD50:

**Species:**

Rabbit

**Method**

OECD 402

**ingredient** Acrylic resin

**Acute dermal toxicity** >2000 mg/kg

**Effective dose**

LD50:

**Species:**

Rabbit

**Method**

OECD 402

**ingredient** Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

**Acute dermal toxicity** >2000 mg/kg

**Effective dose**

LD50:

**Species:**

Rat

**Method**

OECD 402

## Acute oral toxicity

**ingredient** 7,7,9-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecan-1,16-diol dimethacrylate

**Acute oral toxicity** >5000 mg/kg

**Effective dose**

LD50:

**Species:**

Rat

**Method**

OECD 401

**ingredient** Acrylated oligomer

**Acute oral toxicity** >5000 mg/kg

**Effective dose**

LD50:

**Species:**

Rat

**Method**

OECD 401

**ingredient** Epoxy resin

**Acute oral toxicity** 13800 mg/kg

**Effective dose**

LD50:

**Species:**

Rat



**ingredient** Acrylic resin

**Acute oral toxicity** >2000 mg/kg

**Effective dose**

LD50:

**Species:**

Rat

**ingredient** Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

**Acute oral toxicity** >2000 mg/kg

**Effective dose**

LD50:

**Species:**

Rat

**Method**

OECD 401

## Respiratory or skin sensitisation

### Sensitisation to the respiratory tract

**Assessment/classification**

May cause sensitization by inhalation and skin contact.

### Skin sensitisation

**Assessment/classification**

May cause sensitization by skin contact.

## SECTION 12: Ecological information

### Additional information

Do not allow uncontrolled discharge of product into environment. Do not allow to enter into surface water or drains. The product has not been tested. The statement is derived from the properties of the components.

### 12.1 Toxicity

#### Aquatic toxicity

##### Acute (short-term) fish toxicity

**ingredient** 7,7,9-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecan-1,16-diol dimethacrylate

**Acute (short-term) fish toxicity** 10.1 mg/L

**Effective dose**

LC50:

**Test duration** 96 h

**species**

Danio rerio (zebrafish)

**Method**

OECD 203

**ingredient** Acrylated oligomer

**Acute (short-term) fish toxicity** 100 mg/L

**Effective dose**

LC50:

**Test duration** 96 h

**species**

Danio rerio (zebrafish)

**Method**

OECD 203

**ingredient** Acrylic resin

**Acute (short-term) fish toxicity** 5.62 mg/L

**Effective dose**

LC50:

**Test duration** 96 h

**species**

Danio rerio (zebrafish)

**ingredient** Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

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

**Effective dose**

LC50:

**Test duration** 96 h

**species**

Danio rerio (zebrafish)

**Method**

OECD 203

**ingredient** Epoxy resin

**Acute (short-term) fish toxicity** 1.5 mg/L

**Effective dose**

LC50:

**Test duration** 96 h

**species**

Salmo trutta fario (L) (Freshwater trout)

**Acute (short-term) toxicity to crustacea**

**ingredient** Epoxy resin

**Acute (short-term) toxicity to crustacea** 2.7 mg/L

**Effective dose**

EC50

**Test duration** 48 h

**species**

Daphnia magna (Big water flea)

**ingredient** Acrylic resin

**Test duration** 48 h

**species**

Daphnia magna (Big water flea)

**Result / evaluation**

No toxicity was observed

**ingredient** Phenyl bis(2,4,6-trimethylbenzoyl)-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 algae and cyanobacteria**

**ingredient** Acrylic resin

**Acute (short-term) toxicity to algae and cyanobacteria** 12 mg/L

**Effective dose**

IC50:

**Test duration** 72 h

**species**

Scenedesmus subspicatus

**Method**

OECD 201

**12.2 Persistence and degradability**

**Biodegradation**

**ingredient** 7,7,9-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecan-1,16-diol dimethacrylate

**Degradation rate** 22 %

**Method**

OECD 301F/ ISO 9408/ EEC 92/69/V, C.4-D

**ingredient** Acrylated oligomer

**parameter**

This material is not readily biodegradable.

**12.3 Bioaccumulative potential**

**Assessment/classification**

The product has not be tested.

**12.4 Mobility in soil**

No information available.

**12.5 Results of PBT and vPvB assessment**

The product has not be tested.

**12.6 Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Directive 2008/98/EC (Waste Framework Directive)**

**Before intended use**

**Appropriate disposal / Package**

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

**Waste code product** 070208

**hazardous waste** Yes.

**Waste name**

other still bottoms and reaction residues

**After intended use**

**Appropriate disposal / Product**

Waste disposal according to official state regulations.

**Waste code packaging** 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.	3082	3082	3082
14.2 Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol A - Epichlorohydrin polymer)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol A - Epichlorohydrin polymer)	Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A - Epichlorohydrin polymer)
14.3 Class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 ENVIRONMENTALLY HAZARDOUS	Yes.	Yes.	Yes.
14.6 Special precautions for user	not applicable	not applicable	not applicable
14.7 Maritime transport in bulk according to IMO instruments	not applicable	not applicable	not applicable

**Additional information - Land transport (ADR/RID)**

**Hazard label(s)** 9  
**Classification code** M6  
**Limited quantity (LQ)** 5 L  
**Hazard identification number (Kemler No.)** 90  
**tunnel restriction code** -  
**transport category** 3

**Additional information - Sea transport (IMDG)**

**Marine pollutant** Yes.

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

**Limited quantity (LQ)** 30

**SECTION 15: Regulatory information**

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

**15.2 Chemical Safety Assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**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)**

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

H413 May cause long lasting harmful effects to aquatic life.

### **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.