

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

1.1 Product identifier

Trade name/designation Photopolymer E-Tool 2.0

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

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

Skin Sens. 1

hazard statements for health hazards

H317 May cause an allergic skin reaction.

health hazards

Eye Dam. 1

hazard statements for health hazards

H318 Causes serious eye damage.

health hazards

STOT SE 3

hazard statements for health hazards

H335 May cause respiratory irritation.

health hazards

STOT RE 2

hazard statements for health hazards

H373 May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Environmental hazards

Aquatic Chronic 3

hazard statements for environmental hazards

H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms



GHS07



GHS05



GHS08

Signal word

Warning

Hazard statements

hazard statements for health hazards

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H373 May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

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.

P271 Use only outdoors or in a well-ventilated area.

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

Disposal:

P501 Dispose of contents/container to industrial incineration plant.

Product identifiers

Phosphine oxide

Acrylated monomer

Special rules on packaging

Tactile warning according to EN/ISO 11683.

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

Additional information

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

3.1/3.2 Substances/Mixtures

Hazardous ingredients

Phosphine oxide	<1 %
CAS Proprietary	
Skin Sens. 1, H317 / Repr. 2, H361	
Acrylated oligomer	5 - 10 %
CAS Proprietary	
Skin Irrit. 2, H315 / Eye Dam. 1, H318 / Eye Irrit. 2, H319	
Acrylated monomer	5 - 15 %
CAS Proprietary	
Acute Tox. 4, H302 / Skin Sens. 1, H317 / Eye Dam. 1, H318 / STOT RE 2, H373	
Acrylated monomer	5 - 10 %
CAS Proprietary	
Skin Irrit. 2, H315 / Skin Sens. 1, H317	
Glass beads	45 - 75 %
CAS 65997-17-3	
Skin Irrit. 2, H315 / Eye Irrit. 2, H319 / STOT SE 3, H335	
Acrylated oligomer	5 - 10 %
CAS Proprietary	
Skin Irrit. 2, H315 / Skin Sens. 1, H317 / Eye Irrit. 2, H319 / STOT SE 3, H335	
Acrylated monomer	3 - 5 %
CAS Proprietary	
Skin Sens. 1, H317 / Aquatic Chronic 3, H412	

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.

Following 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

Additional information

Do not use a brush or compressed air for cleaning surfaces or clothing. Clear spills immediately. Eliminate leaks immediately.

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

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.

Recommended storage temperature:

Protect containers against damage.

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

Appropriate engineering controls

Structural measures to prevent exposure

Do not use above following temperatures:

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.

Environmental exposure controls

Instructional measures to prevent exposure

Do not use above following temperatures:

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state

liquid

Colour

opaque
light 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)	>100 °C	
Auto-ignition temperature		not determined
Decomposition temperature		not determined

	parameter	Method - source - remark
pH	6.8 - 7.2	Temperature 25 °C
Soluble (g/L) in		Soluble in: Isopropanol Alcohol
Soluble (g/L) in		Insoluble in: water
Fat solubility		not determined
Water solubility		not determined
Partition coefficient: n-octanol/water		not determined
Vapour pressure		not determined
Vapour density		not determined
Relative density	1.55 - 1.75 g/cm ³	Temperature 25 °C
particle characteristics		not determined
Dynamic viscosity	1000 - 3000 mPa*s	Temperature 25 °C
flow time		not determined
Kinematic viscosity		not determined

9.2 Other 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 Acrylated oligomer

Acute dermal toxicity >5000 mg/kg

Effective dose

LD50:

Species:

Rat

ingredient Acrylated monomer

Acute dermal toxicity >2000 mg/kg

Effective dose

LD50:

Species:

Rat

source

Literature

ingredient Acrylated monomer

Acute dermal toxicity >5000 mg/kg

source

Estimate

ingredient Phosphine oxide

Acute dermal toxicity >2000 mg/kg

Effective dose

LD50:

Species:

Rat

Method

OECD 402

Acute inhalation toxicity (vapour)

ingredient Acrylated monomer

Acute inhalation toxicity (vapour) 5.28 mg/kg

Effective dose

LC50:

Exposure time 4 h

Species:

Rat

ingredient Acrylated monomer

Acute inhalation toxicity (vapour) 40 mg/L

Exposure time 4 h

source

Estimate

Acute oral toxicity

ingredient Acrylated oligomer

Acute oral toxicity >2000 mg/kg

Effective dose

LD 0:

Species:

Rat

ingredient Acrylated monomer

Acute oral toxicity 588 mg/kg

Effective dose

LD50:

Species:

Rat

Method

OECD 401

ingredient Acrylated monomer

Acute oral toxicity >5000 mg/kg

source

Estimate

ingredient Phosphine oxide

Acute oral toxicity >5000 mg/kg

Effective dose

LD50:

Species:

Rat

Method

OECD 401

skin corrosion/irritation

Assessment/classification

Irritant.

Serious eye damage/irritation

In vitro eye test

Irritant. Irritating to eyes. Risk of serious damage to eyes.

Species:

Rabbit.

Respiratory or skin sensitisation

Skin sensitisation

Assessment/classification

May cause sensitization by inhalation and skin contact.

STOT-single exposure

STOT SE 3

Irritation to respiratory tract

Assessment/classification

May cause respiratory irritation.

STOT-repeated exposure

STOT RE 1 and 2

Oral specific target organ toxicity (repeated exposure)

Other information

May causes damage to organs through prolonged or repeated exposure if swallowed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

ingredient Acrylated monomer

Acute (short-term) fish toxicity >200 mg/L

Effective dose

LC50:

Test duration 96 h

species

Danio rerio (zebrafish)

ingredient Phosphine oxide

Acute (short-term) fish toxicity 1 - 10 mg/L

Effective dose

LC50:

Test duration 96 h

species

Danio rerio (zebrafish)

Acute (short-term) toxicity to crustacea

ingredient Acrylated monomer

Acute (short-term) toxicity to crustacea >200 mg/L

Effective dose

EC50

Test duration 48 h

species

Daphnia magna (Big water flea)

Method

OECD 202

ingredient Acrylated monomer

Acute (short-term) toxicity to crustacea 2.4 mg/L

Effective dose

EC50

Test duration 48 h

species

Daphnia magna (Big water flea)

ingredient Phosphine oxide

Acute (short-term) toxicity to crustacea 3.53 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 Acrylated monomer

Acute (short-term) toxicity to algae and cyanobacteria 120 mg/L

Effective dose

EC50

Test duration 72 h

species

Pseudokirchneriella subcapitata

Method

OECD 201

ingredient Acrylated monomer

Acute (short-term) toxicity to algae and cyanobacteria 1.6 mg/L

Effective dose

EC50

Test duration 72 h

species

Pseudokirchneriella subcapitata

ingredient Phosphine oxide

Acute (short-term) toxicity to algae and cyanobacteria 2.01 mg/L

Effective dose

EC50

Test duration 72 h

species

Pseudokirchneriella subcapitata

Method

OECD 201

Assessment/classification

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.

12.2 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

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.	not applicable	not applicable	not applicable
14.2 Proper Shipping Name	not applicable	not applicable	not applicable
14.3 Class(es)	not applicable	not applicable	not applicable
14.4 Packing group	not applicable	not applicable	not applicable
14.5 ENVIRONMENTALLY HAZARDOUS	not applicable	not applicable	not applicable
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)

remark

No dangerous good in sense of this transport regulation.

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

EU legislation

Authorisations and/or restrictions on use

Restrictions of occupation

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has not been 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)

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H361 Suspected of damaging fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

H373 May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

H412 Harmful to aquatic life with long lasting effects.

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.