

## 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 ABS TRU

### 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

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

#### 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.

##### health hazards

STOT SE 3

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**hazard statements for health hazards**

H335 May cause respiratory irritation.

**Environmental hazards**

Aquatic Chronic 2

**hazard statements for environmental hazards**

H411 Toxic to aquatic life with long lasting effects.

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

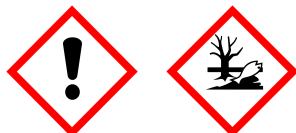
**Additional information**

No information available for acute dermal and inhalative toxicity

**2.2 Label elements**

**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.

H332 Harmful if inhaled.

H335 May cause respiratory 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.

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

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.

**Storage:**

P403 Store in a well-ventilated place.

P404 Store in a closed container.

**Disposal:**

P501 Dispose of contents/container to accordance with local regulation.

**Product identifiers**

Hazard components for labelling

Hexane-1,6-diol diacrylate  
Isobornyl acrylate  
Phosphine oxide  
Titanium dioxide**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****remark**

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

**3.1/3.2 Substances/Mixtures****Hazardous ingredients**

|  |             |
|--|-------------|
| hexane-1,6-diol diacrylate   | 3 - 15 %    |
| CAS 13048-33-4   |             |
| EC 235-921-9   |             |
| INDEX 607-109-00-8   |             |
| Xi R36/38; R43   |             |
| Skin Irrit. 2, H315 / Eye Irrit. 2, H319 / Skin Sens. 1, H317                      |             |
| Acrylated monomer  | 10 - 20 %   |
| CAS Proprietary  |             |
| Skin Irrit. 2, H315 / Eye Dam. 1, H318   |             |
| Acrylated oligomer   | 40 - 60 %   |
| CAS Proprietary  |             |
| Skin Irrit. 2, H315 / Eye Irrit. 2, H319   |             |
| Acrylated monomer  | 1 - 5 %     |
| CAS Proprietary  |             |
| Eye Irrit. 2, H319 / Aquatic Chronic 2, H411                                       |             |
| Titanium dioxide   | 0.1 - 0.2 % |
| Acute Tox. 4, H332 / Skin Irrit. 2, H315 / Eye Irrit. 2, H319 / STOT<br>SE 3, H335 |             |
| Isobornyl acrylate   | 1 - 3 %     |
| CAS 5888-33-5  |             |
| EC 227-561-6   |             |
| Acute Tox. 4, H332 / Skin Irrit. 2, H315 / Eye Irrit. 2, H319 / STOT<br>SE 3, H335 |             |
| Phosphine oxide  | <2 %        |
| CAS Proprietary  |             |
| 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.

### **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 with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

### **After 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**

High power water jet

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

#### **Hazardous combustion products**

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.

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## 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

#### 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 eat, drink, smoke, sniff.

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

Protect against:

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.

##### 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

yellow-orange

#### Odour

Acrylate

|   |           | parameter         | Method - source - remark |
|---|-----------|-------------------|--------------------------|
| pH                                      | 7.2 - 7.6 | Temperature 25 °C |                          |
| Melting point/freezing point            |           |                   | not determined           |
| Initial boiling point and boiling range | >100 °C   |                   |                          |
| Flash point (°C)                        | >150 °C   |                   |                          |
| Evaporation rate                        |           |                   | not determined           |
| flammability                            |           |                   | not determined           |

| parameter                              | Method - source - remark          |
|--|-----------------------------------|
| Upper explosion limit                  | not determined                    |
| lower explosion limit                  | not determined                    |
| Vapour pressure                        | not determined                    |
| Vapour density                         | not determined                    |
| Density                                | 1.08 - 1.12 g/cm <sup>3</sup>     |
| Fat solubility (g/L)                   | not determined                    |
| Water solubility (g/L)                 | insoluble                         |
| Soluble (g/L) in                       | Isopropyl alcohol.                |
| Partition coefficient: n-octanol/water | not determined                    |
| Auto-ignition temperature              | not determined                    |
| Decomposition temperature              | not determined                    |
| Dynamic viscosity                      | 600 - 900 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 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 substance, 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** Titanium dioxide

**Acute dermal toxicity** >10000 mg/kg

##### Effective dose

LD50:

##### Species:

Rat.

**ingredient** Isobornyl acrylate

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

##### Effective dose

LD50:

##### Species:

Rabbit.

##### Acute oral toxicity

**ingredient** Titanium dioxide

**Acute oral toxicity** >10000 mg/kg

##### Effective dose

LD50:

##### Species:

Rat.

**ingredient** hexane-1,6-diol diacrylate

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

##### Effective dose

LD50:

##### Species:

Rat.

**ingredient** Isobornyl acrylate

**Acute oral toxicity** >4890 mg/kg

##### Effective dose

LD50:

##### Species:

Rat.

#### Eye damage/irritation

##### In vitro eye test

Causes serious eye irritation.



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## Respiratory or skin sensitisation

### Skin sensitisation

#### Assessment/classification

May cause sensitization by inhalation and skin contact. May cause an allergic skin reaction.

### STOT-single exposure

#### STOT SE 3

### Irritation to respiratory tract

#### Assessment/classification

Irritating to respiratory system.

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## SECTION 12: Ecological information

### Additional information

Do not allow uncontrolled discharge of product into the 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** Titanium dioxide

**Acute (short-term) fish toxicity** >1000 mg/L

##### Effective dose

LC50:

**Test duration** 96 h

##### species

Brachydanio rerio (zebra-fish)

**ingredient** Phosphine oxide

**Acute (short-term) fish toxicity** >0.09 mg/L

##### Effective dose

LC50:

**Test duration** 96 h

##### species

Brachydanio rerio (zebra-fish)

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

**ingredient** Titanium dioxide

**Acute (short-term) toxicity to crustacea** >1000 mg/L

##### Effective dose

EC50

**Test duration** 48 h

##### species

Daphnia magna (Big water flea)

**ingredient** Phosphine oxide

**Acute (short-term) toxicity to crustacea** >1.175 mg/L

##### Effective dose

EC50

**Test duration** 48 h

**species**

Daphnia magna (Big water flea)

**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 |                          |                      |                                    |

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

#### remark

No dangerous good in sense of this transport regulation.

### Additional information - Sea transport (IMDG)

#### remark

No dangerous good in sense of this transport regulation.

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

#### remark

No dangerous good in sense of this transport regulation.

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## 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

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: 2-Propenoic acid, 1,6-hexanediyl ester CAS-No. 13048-33-4 and 2-Propenoic acid, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel- CAS No. 5888-33-5.

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

### 15.2 Chemical Safety Assessment

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

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## SECTION 16: Other information

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

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H411 Toxic 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.