

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

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.

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

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

hazard statements for health hazards

H335 May cause respiratory irritation.

Environmental hazards

Aquatic Chronic 2

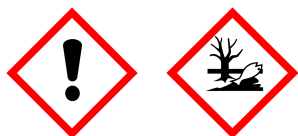
hazard statements for environmental hazards

H411 Toxic to aquatic life with long lasting effects.

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

Additional information

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

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.

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 (CO₂)

Dry extinguishing powder

Foam.

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide. Carbon dioxide (CO₂).

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

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

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.

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
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

	parameter	Method - source - remark
Flash point (°C)	>150 °C	
Auto-ignition temperature		not determined
Decomposition temperature		not determined
pH	7.2 - 7.6	Temperature 25 °C
Soluble (g/L) in		Isopropyl alcohol.
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	1.08 - 1.12 g/cm ³	
particle characteristics		not determined
Dynamic viscosity	600 - 900 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 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.

Serious eye damage/irritation

In vitro eye test

Causes serious eye irritation.

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.

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

Danio rerio (zebrafish)

ingredient Phosphine oxide

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

Effective dose

LC50:

Test duration 96 h

species

Danio rerio (zebrafish)

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

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

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
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 - 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.

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

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.