

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

### 1.1 Product identifier

**Trade name/designation** Photopolymer R5 series (included R 05, R5, R5-385, Pro Gray, R5 Gray)

### 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.

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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

Acute Tox. 4

##### hazard statements for health hazards

H302 Harmful if swallowed.

##### health hazards

Acute Tox. 4

##### hazard statements for health hazards

H332 Harmful if inhaled.

##### 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.

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## 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 3

## hazard statements for environmental hazards

H412 Harmful to aquatic life with long lasting effects.

## 2.2 Label elements

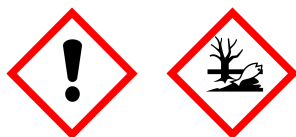
### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

#### Hazard components for labelling

Isobornyl acrylate

Phosphine oxide

#### Hazard pictograms



GHS07

GHS09

#### Signal word

Warning

#### Hazard statements

##### hazard statements for health hazards

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H335 May cause respiratory 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.

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

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

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container to industrial incineration plant.

**Product identifiers**

Isobornyl acrylate

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**

**Additional information**

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

**3.1/3.2 Substances/Mixtures**

**Hazardous ingredients**

Phosphine oxide	1 - 2 %
Skin Sens. 1, H317 / Aquatic Chronic 4, H413	
Isobornyl acrylate	10 - 25 %
CAS 5888-33-5	
EC 227-561-6	
Acute Tox. 4, H302 / Acute Tox. 4, H332 / Skin Irrit. 2, H315 / Eye Irrit. 2, H319 / STOT SE 3, H335	
Acrylated monomer	5 - 30 %
Skin Irrit. 2, H315 / Eye Irrit. 2, H319	
Acrylated oligomer	20 - 60 %
Skin Irrit. 2, H315 / Eye Irrit. 2, H319	

**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

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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.

### 5.1 Extinguishing media

#### Suitable extinguishing media

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

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.

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## 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

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## 6.4 Reference to other sections

No data available

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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. 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

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

No data available

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## 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

red

opaque

black

various

dark grey

translucent

##### 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	

	parameter	Method - source - remark
Auto-ignition temperature		not determined
Decomposition temperature		not determined
pH	6.8 - 7.2	Temperature 25 °C
Soluble (g/L) in		Soluble in: Isopropanol Alcohol
Soluble (g/L) in		Insoluble in:
Fat solubility		not determined
Water solubility		not determined
Partition coefficient: n-octanol/water		not determined
Vapour pressure	0.0015 mm Hg	Temperature 25 °C
Vapour density		not determined
Relative density	1.08 - 1.12 g/cm <sup>3</sup>	Temperature 25 °C
particle characteristics		not determined
Dynamic viscosity	300 - 600 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.

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Carbon dioxide  
Carbon monoxide

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## 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

**ingredient** Isobornyl acrylate

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

##### Effective dose

LD50:

##### Species:

Rabbit

##### Acute oral toxicity

**ingredient** Isobornyl acrylate

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

##### Effective dose

LD50:

##### Species:

Rat.

**ingredient** Phosphine oxide

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

##### Effective dose

LD50:

##### Species:

Rat

##### Method

OECD 401

#### Serious eye damage/irritation

##### In vitro eye test

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

##### Species:

Rabbit.



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## Respiratory or skin sensitisation

### Skin sensitisation

#### Assessment/classification

May cause sensitization by inhalation and skin contact.

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## 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

Danio rerio (zebrafish)

##### 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 algae and cyanobacteria

**ingredient** Phosphine oxide

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

##### Effective dose

EC50

**Test duration** 72 h

##### species

Desmodesmus subspicatus

##### Method

OECD 201

### 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.

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## SECTION 15: Regulatory information

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

### 15.2 Chemical Safety Assessment

Irritant

Harmful

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## 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.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

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.