

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## ProtoPearl

Revision date: 05.06.2019

Product code: 970182

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

ProtoPearl

**Further trade names**

1000 g: 970182-1000

500 g: 970182-500

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

light curing resin for technical applications

**1.3. Details of the supplier of the safety data sheet**

Company name: Solidscape, Inc.  
 Street: 316 Daniel Webster Highway  
 Place: USA-NH 03054 Merrimack  
 Telephone: +1 603 429-9700  
 e-mail (Contact person): precision@solidscape.com  
 Internet: https://www.solidscape.com

**1.4. Emergency telephone number:**

+1 603-429-9700 8am - 5pm, Monday - Friday, Eastern Standard Time

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1A

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes skin irritation.

May cause an allergic skin reaction.

Toxic to aquatic life with long lasting effects.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

urethane dimethacrylate (UDMA)

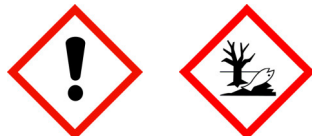
acrylic-resin

2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate

phosphine oxide

Signal word: Warning

Pictograms:

**Hazard statements**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with local regulation.

#### Special labelling of certain mixtures

Restricted to professional users.

#### 2.3. Other hazards

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Chemical characterization

Mixture of acrylic resins and initiators.

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
72869-86-4	urethane dimethacrylate (UDMA)			< 70 %
	Skin Sens. 1, Aquatic Chronic 3; H317 H412			
	acrylic-resin			< 50 %
	Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H317 H411			
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate			< 3 %
	239-701-3	607-111-00-9		
	Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1; H319 H315 H317			
	phosphine oxide			1 - < 5 %
	Skin Sens. 1A, Aquatic Chronic 4; H317 H413			

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

Get medical advice/attention if you feel unwell. Immediately remove any contaminated clothing, shoes or stockings.

##### After inhalation

Get medical advice/attention if you feel unwell. Provide fresh air.

##### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Immediately remove any contaminated clothing, shoes or stockings. If skin irritation occurs: Get medical advice/attention.

##### After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. If eye irritation persists: Get medical advice/attention.

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**After ingestion**

Do NOT induce vomiting. Medical treatment necessary.

**4.2. Most important symptoms and effects, both acute and delayed**

No information available.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Foam. Extinguishing powder Carbon dioxide

**Unsuitable extinguishing media**

Full water jet

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

In case of fire may be liberated: Carbon monoxide Carbon dioxide Hazardous decomposition products

**5.3. Advice for firefighters**

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

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**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****Advice on safe handling**

Do not breathe gas/fumes/vapour/spray.

Provide fresh air.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Protect from the action of light. Keep only in the original container at a temperature between 4 -25 °C. Can polymerize with intense heat release.

**Hints on joint storage**

No special measures are necessary.

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

#### Protective and hygiene measures

It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

#### Eye/face protection

Eye glasses with side protection

#### Hand protection

Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

#### Skin protection

Wear suitable protective clothing.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	silver grey	
Odour:	No data available	
pH-Value:		not determined

#### Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	> 100 °C

#### Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined

#### Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	not determined
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.

#### Solubility in other solvents

The substance is not soluble in water.

Partition coefficient:	not determined
Vapour density:	not determined
Evaporation rate:	not determined

### 9.2. Other information

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Solid content: not determined

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

### 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

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

#### 10.4. Conditions to avoid

Protect from the action of light. Keep only in the original container at a temperature between 4 -25 °C. Can polymerize with intense heat release.

#### 10.5. Incompatible materials

Oxidising agent, Reducing agent, Heavy metals, Acids Alkali (lye)

#### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
72869-86-4	urethane dimethacrylate (UDMA)				
	oral	LD50 >2000 mg/kg	Rat	OECD 401	
	phosphine oxide				
	oral	LD50 > 2000 mg/kg	Rat		
	dermal	LD50 > 2000 mg/kg	Rat		

##### Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

##### Sensitising effects

May cause an allergic skin reaction. (urethane dimethacrylate (UDMA); acrylic-resin; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate; phosphine oxide)  
May cause sensitization by skin contact.

##### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

##### STOT-single exposure

Based on available data, the classification criteria are not met.

##### STOT-repeated exposure

Based on available data, the classification criteria are not met.

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#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### Further information

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

### SECTION 12: Ecological information

#### 12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
72869-86-4	urethane dimethacrylate (UDMA)					
	Acute fish toxicity	LC50 mg/l	10,1	96 h	Brachydanio rerio (zebra-fish)	OECD 203
	phosphine oxide					
	Acute fish toxicity	LC50 mg/l	(> 0,09)	96 h	Brachydanio rerio (zebra-fish)	
	Acute crustacea toxicity	EC50 mg/l	(> 1,175)	48 h	Daphnia magna (Big water flea)	

#### 12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
72869-86-4	urethane dimethacrylate (UDMA)				
	Biodegradation	22 %	28	OECD 301 F	

#### 12.3. Bioaccumulative potential

The product has not been tested.

#### 12.4. Mobility in soil

The product has not been tested.

#### 12.5. Results of PBT and vPvB assessment

The product has not been tested.

#### 12.6. Other adverse effects

No information available.

#### Further information

Do not allow uncontrolled discharge of product into the environment. Do not allow to enter into surface water or drains.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

##### Waste disposal number of waste from residues/unused products

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues; hazardous waste

##### Waste disposal number of contaminated packaging

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues; hazardous waste

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#### Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<b>14.1. UN number:</b>	UN 3082
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9
Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	90
Tunnel restriction code:	-

#### Inland waterways transport (ADN)

<b>14.1. UN number:</b>	UN 3082
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9
Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1

#### Marine transport (IMDG)

<b>14.1. UN number:</b>	UN 3082
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9
Special Provisions:	274, 335, 969
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-F

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

<b>14.1. UN number:</b>	UN 3082
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9
Special Provisions:	A97 A158 A197

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Limited quantity Passenger:	30 kg G	
Passenger LQ:	Y964	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		964
IATA-max. quantity - Passenger:		450 L
IATA-packing instructions - Cargo:		964
IATA-max. quantity - Cargo:		450 L

#### **14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:	yes
Danger releasing substance:	acrylic-resin

#### **14.6. Special precautions for user**

No information available.

#### **14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

not applicable

### **SECTION 15: Regulatory information**

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

##### **EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3: 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate

##### **National regulatory information**

Water contaminating class (D): 2 - clearly water contaminating

#### **15.2. Chemical safety assessment**

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

### **SECTION 16: Other information**

#### **Changes**

SECTION 4: First aid measures

#### **Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

#### **Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Skin Sens. 1A; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

#### **Relevant H and EUH statements (number and full text)**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.



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- 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.

**Further Information**

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.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*