

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

## ProtoPearl

Revision date: 05.06.2019

Product code: 970182

Page 1 of 8

**1. Identification****Product identifier**

ProtoPearl

**Further trade names**

1000 g: 970182-1000

500 g: 970182-500

**Recommended use of the chemical and restrictions on use****Use of the substance/mixture**

light curing resin for technical applications

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

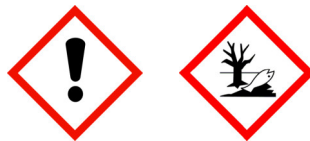
Company name: Solidscape, Inc.  
Street: 316 Daniel Webster Highway  
Place: USA-NH 03054 Merrimack  
Telephone: +1 603 429-9700  
e-mail (Contact person): precision@solidscape.com  
Internet: <https://www.solidscape.com>

**Emergency phone number:** +1 603-429-9700 8am - 5pm, Monday - Friday, Eastern Standard Time**2. Hazard(s) identification****Classification of the chemical****29 CFR Part 1910.1200**

Skin corrosion/irritation: Skin Irrit. 2

Respiratory or skin sensitization: Skin Sens. 1A

Hazardous to the aquatic environment: Aquatic Chronic 2

**Label elements****29 CFR Part 1910.1200****Signal word:** Warning**Pictograms:****Hazard statements**

Causes skin irritation

May cause an allergic skin reaction

Toxic to aquatic life with long lasting effects

**Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection.

If on skin: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Collect spillage.

Dispose of contents/container in accordance with local regulation.

**Hazards not otherwise classified**

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

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### ProtoPearl

Revision date: 05.06.2019

Product code: 970182

Page 2 of 8

### 3. Composition/information on ingredients

#### Mixtures

##### Chemical characterization

Mixture of acrylic resins and initiators.

##### Hazardous components

CAS No	Components	Quantity
72869-86-4	urethane dimethacrylate (UDMA)	* < 70 %
	acrylic-resin	* < 50 %
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	* < 3 %
	phosphine oxide	* 1 - < 5 %

##### Further information

\* The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

### 4. First-aid measures

#### 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.

##### After ingestion

Do NOT induce vomiting. Medical treatment necessary.

#### Most important symptoms and effects, both acute and delayed

No information available.

#### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### 5. Fire-fighting measures

#### Extinguishing media

##### Suitable extinguishing media

Foam. Extinguishing powder Carbon dioxide

##### Unsuitable extinguishing media

Full water jet

#### Specific hazards arising from the chemical

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

#### Special protective equipment and precautions for fire-fighters

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

# Safety Data Sheet

according to 29 CFR 1910.1200(g)

**ProtoPearl**

Revision date: 05.06.2019

Product code: 970182

Page 3 of 8

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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

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

**Environmental precautions**

Do not allow to enter into surface water or drains.

**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.

**Reference to other sections**

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

**7. Handling and storage****Precautions for safe handling****Advice on safe handling**

Do not breathe gas/fume/vapour/spray.  
Provide fresh air.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking.

**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 (40 -75°F). Can polymerize with intense heat release.

**Hints on joint storage**

No special measures are necessary.

**8. Exposure controls/personal protection****Control parameters****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.

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### ProtoPearl

Revision date: 05.06.2019

Product code: 970182

Page 4 of 8

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state:	Liquid	
Color:	silver gray	
Odor:	No data available	
pH-Value:		not determined

### **Changes in the physical state**

Melting point/freezing 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
Vapor 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
Vapor density:		not determined
Evaporation rate:		not determined

### Other information

Solid content:		not determined
----------------	--	----------------

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

## 10. Stability and reactivity

### Reactivity

No hazardous reaction when handled and stored according to provisions.

### Chemical stability

Stability:	Stable
------------	--------

The product is stable under storage at normal ambient temperatures.

### Possibility of hazardous reactions

Hazardous reactions:	Will not occur
----------------------	----------------

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

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### ProtoPearl

Revision date: 05.06.2019

Product code: 970182

Page 5 of 8

#### Conditions to avoid

Protect from the action of light. Keep only in the original container at a temperature between 4 -25 °C (40 -75°F). Can polymerize with intense heat release.

#### Incompatible materials

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

#### Hazardous decomposition products

No known hazardous decomposition products.

## 11. Toxicological information

### Information on toxicological effects

#### **Acute toxicity**

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

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

#### **Irritation and corrosivity**

Causes skin irritation

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

#### **Sensitizing 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.

#### **Specific target organ toxicity (STOT) - single exposure**

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

#### **Specific target organ toxicity (STOT) - repeated exposure**

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

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): No ingredient of this mixture is listed.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

#### **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.

## 12. Ecological information

### Persistence and degradability

The product has not been tested.

### Bioaccumulative potential

The product has not been tested.

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### ProtoPearl

Revision date: 05.06.2019

Product code: 970182

Page 6 of 8

#### **Mobility in soil**

The product has not been tested.

#### **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.

### 13. Disposal considerations

#### **Waste treatment methods**

##### **Advice on disposal**

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

##### **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.

### 14. Transport information

#### **US DOT 49 CFR 172.101**

##### **UN/ID number:**

UN 3082

##### **Proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(ACRYLIC RESIN)  
Special Provisions: 8, 146, 173, 335, IB3, T4, TP1, TP29  
Limited quantity: No limit

##### **Transport hazard class(es):**

9

##### **Packing group:**

III

Hazard label:

9

#### **Marine transport (IMDG)**

##### **UN number:**

UN 3082

##### **UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(ACRYLIC RESIN)

##### **Transport hazard class(es):**

9

##### **Packing group:**

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)**

##### **UN number:**

UN 3082

##### **UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(ACRYLIC RESIN)

##### **Transport hazard class(es):**

9

##### **Packing group:**

III

Hazard label:

9

Special Provisions:

A97 A158 A197

Limited quantity Passenger:

30 kg G

Passenger LQ:

Y964

Excepted quantity:

E1

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### ProtoPearl

Revision date: 05.06.2019

Product code: 970182

Page 7 of 8

IATA-packing instructions - Passenger:	964
IATA-max. quantity - Passenger:	450 L
IATA-packing instructions - Cargo:	964
IATA-max. quantity - Cargo:	450 L

**Other applicable information (air transport)**

Special Provisions: A97 A158 A197

**Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:	yes
Danger releasing substance:	acrylic-resin

**Special precautions for user**

No information available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

not applicable

## 15. Regulatory information

**U.S. Regulations**
**National Inventory TSCA**

All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

**National regulatory information**

SARA Section 311/312 Hazards:

urethane dimethacrylate (UDMA) (72869-86-4): Immediate (acute) health hazard  
 acrylic-resin (-): Immediate (acute) health hazard  
 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate (15625-89-5): Immediate (acute) health hazard  
 phosphine oxide (-): Immediate (acute) health hazard

**State Regulations**
**Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)**

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

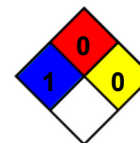
## 16. Other information

**Hazardous Materials Information Label (HMIS)**

Health:	1
Flammability:	0
Physical Hazard:	0

**NFPA Hazard Ratings**

Health:	1
Flammability:	0
Reactivity:	0
Unique Hazard:	


**Changes**

Revision date:	05.06.2019
Revision No:	1,10
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)

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**ProtoPearl**

Revision date: 05.06.2019

Product code: 970182

Page 8 of 8

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%

**Other 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.

---

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