

### 1. Identification

**Product name: Rodin Luting Cement Base and Catalyst**

**Relevant identified uses of the substance or mixture and uses advised against** No further relevant information is available.

**Application of the substance / the mixture** Dual-curing resin-based dental luting material

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

Manufacturer/Supplier:

Pac-Dent, Inc.

670 Endeavor Circle

Brea, CA 92821 USA

Tel. +1 909-839-0888

**Emergency-Call:** 1-800-424-9300 (in the US)

1-703-527-3887 (Outside the US)

### 2. Hazard(s) identification

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

#### Hazard classification

Serious Eye Damage/Irritation: Category 2A.

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1.

#### Label elements

##### Signal word

Danger

##### Symbols

Health Hazard

##### Pictograms





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## Hazard Statements

Causes severe eye irritation.

Inhalation may trigger allergy or asthma symptoms or cause breathing difficulties.

May induce an allergic skin reaction.

## Precautionary Statements

### Prevention:

Avoid inhaling dust, fumes, gas, mist, vapors, or spray.

If ventilation is insufficient, use respiratory protection.

Wear protective gloves and eye/face protection.

Wash thoroughly after handling.

Do not allow contaminated work clothing to leave the workplace.

### Response:

IF INHALED: If breathing becomes difficult, move the individual to fresh air and ensure they are comfortable.

If respiratory symptoms occur, contact a POISON CENTER or seek medical assistance.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

If eye irritation persists, seek medical advice/attention.

IF ON SKIN: Wash thoroughly with soap and water.

If skin irritation or rash develops, get medical advice/attention.

Wash contaminated clothing before reuse.

### Disposal:

Dispose of contents/container in compliance with local, regional, national, and international regulations.

Note: 88% of the mixture contains ingredients with unknown acute inhalation toxicity.

### 3. Composition/information on ingredients

**Chemical characterization:** Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions.

*The following ingredients are in the Catalyst:*

<b>Dangerous components:</b>		
72869-86-4	Urethane Dimethacrylate	15 – 30%
868-77-9	2-Hydroxyethyl Methacrylate	5 – 15%
13760-80-0	Ytterbium Fluoride	5 – 13%
131-57-7	2-Hydroxy-4-methoxybenzophenone	< 1%
5809-08-5	1,1,3,3-Tetramethylbutyl hydroperoxide	< 1%

*The following ingredients are in the Base:*

<b>Dangerous components:</b>		
72869-86-4	Urethane Dimethacrylate	15 – 25%
868-77-9	2-Hydroxyethyl Methacrylate	10 – 15%
13760-80-0	Ytterbium Fluoride	5 – 12%
14294-11-2	1-(pyridine-2-yl) thiourea	1 – 3%

\*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

**Inhalation:**

Move the person to fresh air. If feeling unwell, seek medical attention.

**Skin Contact:**

Wash immediately with soap and water. Remove contaminated clothing and wash before reuse. If symptoms develop, seek medical attention.



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## If Swallowed:

Rinse mouth thoroughly. If feeling unwell, seek medical attention.

## Most Important Symptoms and Effects, Both Acute and Delayed

Allergic respiratory reactions, including difficulty breathing, wheezing, coughing, and chest tightness.

Allergic skin reactions, such as redness, swelling, blistering, and itching.

## Indication of Any Immediate Medical Attention and Special Treatment Required

Not applicable.

## 5. Fire-fighting measures

### 5.1. Suitable extinguishing media

**In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.**

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

**None inherent in this product.**

## Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

## Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## 6. Accidental release measures

### Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area and ensure proper ventilation with fresh air. For large spills or spills in confined spaces, use mechanical ventilation to disperse or exhaust vapors following good industrial hygiene



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practices. Refer to other sections of this SDS for details on physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### Environmental Precautions

Prevent release into the environment.

### Methods and Materials for Containment and Cleaning Up

Collect as much spilled material as possible. Store in a sealed container approved for transport by the appropriate authorities. Clean up any residue and securely seal the container. Dispose of collected material promptly in accordance with applicable local, regional, national, and international regulations.

## 7. Handling and storage

### Precautions for Safe Handling

A no-touch technique is recommended when handling this product. If skin contact occurs, immediately wash the affected area with soap and water. Acrylates can penetrate commonly used gloves, so if the product comes into contact with gloves, they should be removed and discarded. Hands should then be washed thoroughly with soap and water before putting on a new pair of gloves. Avoid breathing dust, fumes, gas, mist, vapors, or spray. Eating, drinking, and smoking should be avoided while using this product. After handling, wash thoroughly to remove any residue. Contaminated work clothing should not be taken out of the workplace and must be washed before reuse. Direct contact with eyes should be avoided.

### Conditions for Safe Storage Including any Incompatibilities

This product should be stored in a cool, dry place, away from sources of heat.

## 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

*The following ingredients are in the Catalyst:*

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
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2,6-Di-Tert-Butyl-P-Cresol (BHT)	128-37-0	ACGIH	TWA(inhalable fraction and vapor):2 mg/m <sup>3</sup>	A4: Not class. as human carcin
PERSULFATE COMPOUNDS	7727-21-1	ACGIH	TWA(as persulfate):0.1 mg/m <sup>3</sup>	

*The following ingredients are in the Base:*

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Titanium Oxide	13463-67-7	ACGIH	TWA:10 mg/m <sup>3</sup>	A4: Not class. as human carcin
Titanium Oxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m <sup>3</sup>	
SILICA, AMORPHOUS	68909-20-6	OSHA	TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m <sup>3</sup>	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### Exposure controls

#### Engineering controls

Use in a well-ventilated area.

#### Personal protective equipment (PPE)

#### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment.

The following eye/face protection(s) are recommended:

Safety Glasses with side shields

#### Skin/hand protection

See Section 7 for additional information on skin protection.

#### Respiratory protection

None required.

### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance	Solid
Physical state Color	Transparent Yellow
Specific Physical Form:	Paste
Odor	Characteristic Odor
Odor threshold	No Data Available
pH	No Data Available
Melting point	Not Applicable
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	1.5 g/cm <sup>3</sup>
Specific Gravity	1.5 [Ref Std:WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Molecular weight	Not Applicable
Volatile Organic Compounds	Not Applicable

### 10. Stability and reactivity

#### Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

#### Chemical stability

Stable.



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## Possibility of hazardous reactions

Hazardous polymerization will not occur.

## Conditions to avoid

Heat

## Incompatible materials

None known.

## Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None Known	

Refer to section 5 for hazardous decomposition products during combustion

## 11. Toxicological information

The information provided below may not fully align with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additionally, toxicological data for individual ingredients may not be reflected in the overall material classification or in the listed signs and symptoms of exposure. This may occur because an ingredient is present below the labeling threshold, is not available for exposure, or the data is not relevant to the material as a whole.

This document has been prepared in compliance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards associated with the product or its ingredients, regardless of the actual level of risk. The degree of risk associated with the hazards listed in this document may vary depending on the level of exposure.

The toxicological information provided below pertains to the individual components of the uncured product. Once properly mixed and/or cured, the product is considered safe for its intended use.

### Information on Toxicological Effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:



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## Inhalation:

Exposure may cause respiratory tract irritation, with possible symptoms including coughing, sneezing, nasal discharge, headache, hoarseness, and pain in the nose and throat.

An allergic respiratory reaction may also occur, leading to symptoms such as difficulty breathing, wheezing, coughing, and chest tightness.

## Skin Contact:

Mild skin irritation may develop, characterized by localized redness, swelling, itching, and dryness. In some cases, an allergic skin reaction (non-photo induced) may occur, with symptoms including redness, swelling, blistering, and itching

## Eye Contact:

Exposure can cause severe eye irritation, with symptoms such as significant redness, swelling, pain, tearing, a cloudy appearance of the cornea, and impaired vision.

## Ingestion:

If swallowed, gastrointestinal irritation may result, with symptoms including abdominal pain, stomach discomfort, nausea, vomiting, and diarrhea.

## Additional Health Effects:

### Carcinogenicity:

Under normal, intended use, exposure levels that could cause carcinogenic effects are not expected. However, this product contains one or more chemicals that have been identified as potential carcinogens.

Ingredient	CAS No.	Class Description	Regulation
Titanium Oxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

### Toxicological Data

If a component is listed in Section 3 but does not appear in the table below, it indicates that either no data are available for that endpoint or the existing data are insufficient for classification.

### Respiratory Sensitization



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For the listed component(s), no current data are available, or the existing data are insufficient for classification.

### **Aspiration Hazard**

For the listed component(s), no current data are available, or the existing data are insufficient for classification.

**For additional toxicological information regarding this material and/or its components, please refer to the contact information provided on the first page of the SDS.**

## **12. Ecological information**

### **Ecotoxicological Information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

### **Chemical Fate Information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

## **13. Disposal considerations**

### **Disposal Methods**

Dispose of contents and container in compliance with local, regional, national, and international regulations.

Waste material should be disposed of at a permitted industrial waste facility. As an alternative disposal method, incineration may be conducted at a facility authorized for waste incineration.

**EPA Hazardous Waste Number (RCRA):** Not regulated.



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**14. Transport information**

<i>UN-Number</i> <i>DOT, ADR, ADN, IMDG, IATA</i>	Void
<i>UN proper shipping name</i> <i>DOT, ADR, ADN, IMDG, IATA</i>	Void
<i>Transport hazard class(es)</i> <i>DOT, ADR, ADN, IMDG, IATA</i> Class	Void
<i>Packing group</i> <i>DOT, ADR, IMDG, IATA</i>	Void
<i>Environmental hazards:</i>	
<i>Marine pollutant:</i>	No
<i>Special precautions for user</i>	Not applicable.
<i>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</i>	Not applicable.
<i>Transport/Additional information:</i>	Product is not classified as a dangerous good for transport (ADR, IMDG, IATA).

**15. Regulatory information**

**US Federal Regulations**

Contact Pac-Dent, Inc. for more information.

**EPCRA 311/312 Hazard Classifications:**

<b>Physical Hazards</b>
Not applicable

<b>Health Hazards</b>
Respiratory or Skin Sensitization
Serious eye damage or eye irritation

**State Regulations**

Contact Pac-Dent, Inc. for more information.



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## Chemical Inventories

This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact Pac-Dent, Inc. for more information.

## International Regulations

Contact Pac-Dent, Inc. for more information.

**This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.**

## 16. Other information

### NFPA Hazard Classification

**Health: 2      Flammability: 1      Instability: 0      Special Hazards: None**

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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The user is solely responsible for determining whether the Pac-Dent, Inc. product is appropriate for their specific purpose and suitable for their method of use or application. Due to the various factors that may impact the use and application of a Pac-Dent, Inc. product—many of which are uniquely within the user's knowledge and control—it is essential that the user evaluate the product to confirm its suitability for their intended purpose.



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