

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

072759124

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

072760882 072760890

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

072759116 072759132 072759140 072760759 072760767 072760783 072760791 072760866 072760874 072760924  
072760932 072760940 072760957 072760965 072760999 072761005 072761013 273044119

**DENTSPLY International**  
**DENTSPLY PROSTHETICS**

**Safety Data Sheet**

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010)

Date Issued: 20 November 1985  
Document Number: 150  
Date Revised: 14 January 2014  
Revision Number: 3

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product Identifier:**

**Trade Name (as labeled):** Lucitone 199® Denture Base Powder  
**Part/Item Number:** 688103, 688203, 688303, 688403, 688105, 688205, 688305, 688405, 688106, 688206, 688306, 688406, 688111, 688211, 688311, 688411, 688102, 688107, 688120, 688220, 688320, 688420

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:**

**Recommended Use:** Resin used in removable dental appliances.  
**Restrictions on Use:** For Professional Use Only

**1.3 Details of the Supplier of the Safety Data Sheet:**

**Manufacturer/Supplier Name:** Dentsply Prosthetics  
**Manufacturer/Supplier Address:** 570 West College Ave.  
York, PA 17401  
**Manufacturer/Supplier Telephone Number:** 717-845-7511 (Product Information)  
**Email address:** Prosthetics\_MSDS@Dentsply.com

**1.4 Emergency Telephone Number:**

**Emergency Contact Telephone Number:** 800-424-9300 Chemtrec

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the Substance or Mixture:**

<b>GHS Classification:</b>		
<b>Health</b>	<b>Environmental</b>	<b>Physical</b>
Skin Sensitizer Category 1 (H317)	Not Hazardous	Not Hazardous

**EU Classification:** Not classified as dangerous

**OSHA Specific Classification:** Combustible Dust

**2.2 Label Elements:**



**Signal Word:** Warning

Contains: Benzoyl Peroxide

Hazard Phrases	Precautionary Phrases
May form combustible dust concentrations in air. H317 May cause an allergic skin reaction.	P210 Keep away from heat, sparks, and open flames. No smoking. P261 Avoid breathing dust. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, protective clothing, eye protection or face protection. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P333+P313 If skin irritation or rash occurs: Get medical attention. P363 Wash contaminated clothing before reuse. P501 Dispose of contents and container in accordance with local and national regulations.

**2.3 Other Hazards:** None known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixture:**

Hazardous Components	C.A.S. #	EINECS #	Classification	WT %
Polymethylmethacrylate	Proprietary	Proprietary	Not applicable	90-100
Benzoyl Peroxide	94-36-0	202-327-6	E, O, Xi, R3, R7, R36, R43 Org. Perox. Type B, H241 Eye Irrit. 2A, H319 Skin Sens. 1, H317	<0.5%

The exact concentration is being withheld as a trade secret.

Refer to Section 16 for the full text of the GHS and EU Classifications.

**4. FIRST AID MEASURES**

**4.1 Description of First Aid Measures:**

<b>Eye</b>	Flush victim's eyes with large quantities of water, while holding the eyelids apart. Get medical attention if irritation persists.
<b>Skin</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation or rash occurs. Launder clothing before re-use.
<b>Inhalation</b>	Remove victim to fresh air. If breathing is difficult have qualified personnel administer oxygen. Get medical attention if symptoms persist.

<b>Ingestion</b>	If conscious, wash mouth out with water. Do not induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.
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**4.2 Most Important Symptoms and Effects, Both Acute and Delayed:**

Dust may cause mild eye and respiratory irritation. May cause skin sensitization. Individuals with sensitivity to methacrylates may also develop an allergic reaction when exposed to this product.

**4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:**

Immediate medical attention is not required.

**Note to Physicians (Treatment, Testing, and Monitoring):** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**5.1 Extinguishing Media:** Use water fog, carbon dioxide, or dry chemical.

**5.2 Special Hazards Arising from the Substance or Mixture:**





Dust generated in processing of this material may present a potential fire and explosion hazard if suspended in air at high concentrations. Settled dust presents a fire hazard. Re-suspension of the dust into the air by vibration, traffic, material handling, etc. in high concentrations in the presence of an ignition source could result in a dust explosion. Minimize the generation and accumulation of dust. Thermal decomposition may release carbon oxides, and methyl methacrylate.

**5.3 Advice for Fire-Fighters:**

**Fire Fighting Procedures:** Cool fire exposed containers and structures with water. Do not use solid water jet as that may create a dust cloud that can present an explosion hazard.

**Precautions for Fire Fighters:** Firefighters should wear full emergency equipment and approved positive pressure self-containing breathing apparatus. Do not enter fire area without proper protection.

**Recommended Protective Equipment for Fire Fighters:**



EYES/FACE	HANDS	RESPIRATORY	THERMAL
			

**6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal Precautions, Protective Equipment and Emergency Procedures:**

Evacuate spill area and keep unprotected personnel away. Eliminate all sources of ignition. Avoid contact with skin, eyes or clothing. Do not breathe dust. Wear appropriate protective clothing as described in Section 8. Powders that become wet may cause surfaces to be extremely slippery and present a slip hazard.

**Recommended Personal Protective Equipment for Containment and Clean-up:**

<b>EYES/FACE</b>	<b>HANDS</b>	<b>RESPIRATORY</b>	<b>SKIN</b>
			

**6.2 Environmental Precautions:**

Do not allow spills to enter sewers or waterways. Report releases as required by local and national authorities.

**6.3 Methods and Material for Containment and Cleaning up:**

Scoop or shovel up using methods that minimize the generation of airborne dust. Non-sparking tools should be used. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentrations. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Place dry material into an appropriate container for disposal. Flush spill area with water to remove residue.

**6.4 Reference to Other Sections:**

Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.

## 7. HANDLING AND STORAGE

**7.1 Precautions for Safe Handling:**

Avoid contact with the eyes, skin and clothing. Do not breathe dust. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Minimize the generation and accumulation of dust. Keep dust away from open flames, hot surfaces and sources of ignition. Follow good housekeeping practices to keep surfaces, including areas overhead such as piping, drop ceilings, ductwork, etc. free from settled dust. Dry powders can build static electricity charges when subjected to friction of transfer and in mixing operations. Provide adequate precautions, such as electrical grounding and bonding.

Do not reuse containers. Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

**7.2 Conditions for Safe Storage, Including Any Incompatibilities:**

Store in a cool, dry, well-ventilated area away from heat, sources of ignition and incompatible materials. Keep container tightly closed when not in use. Keep away from oxidizing agents.

**7.3 Specific End Use (s):** For professional use only.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters:

#### Occupational Exposure Limits:

Polymethylmethacrylate	United States	5 mg/m <sup>3</sup> (respirable), 15 mg/m <sup>3</sup> (total dust) TWA OSHA PEL (As PNOC)
	Germany	4 mg/m <sup>3</sup> TWA DFG MAK (Inhalable) (As Dust, general threshold limit value)
	United Kingdom	None Established
	European Union	None Established
Benzoyl Peroxide	United States	5 mg/m <sup>3</sup> TWA ACGIH TLV 5 mg/m <sup>3</sup> TWA OSHA PEL
	Germany	5 mg/m <sup>3</sup> TWA (Inhalable), 5 mg/m <sup>3</sup> STEL (Inhalable) DFG MAK
	United Kingdom	5 mg/m <sup>3</sup> TWA UK WEL
	European Union	Belgium: 5 mg/m <sup>3</sup> TWA

**Biological Exposure Limits:** None Established

### 8.2 Exposure Controls:

**Appropriate Engineering Controls:** Use adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits. Provide local exhaust ventilation where product is processed in a manner that generates dust. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e. there is no leakage from the equipment). Use only appropriately classified electrical equipment.

#### Individual Protection Measures (PPE):



**Specific Eye/face Protection:** Wear safety glasses or goggles where eye contact is possible.

**Specific Skin Protection:** Wear impervious gloves such as rubber to avoid skin contact.

**Specific Respiratory Protection:** If the exposure limits are exceeded, an approved respirator with dust/mist cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

**Specific Thermal Hazards:** None required.

#### Recommended Personal Protective Equipment

EYES/FACE	HANDS	RESPIRATORY	SKIN
			

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on Basic Physical and Chemical Properties:

<b>Appearance:</b>	Pink free flowing powder	<b>Explosive limits:</b>	<b>LEL:</b> 20 g/m <sup>3</sup> <b>UEL:</b> Not determined
<b>Odor:</b>	Faint methacrylate odor	<b>Vapor pressure (mmHg):</b>	Not applicable
<b>Odor threshold:</b>	Not determined	<b>Vapor density:</b>	Not applicable
<b>pH:</b>	Not applicable	<b>Relative density:</b>	Not determined
<b>Melting/freezing point:</b>	Not applicable	<b>Solubility(ies):</b>	Not soluble
<b>Initial boiling point and boiling range:</b>	Not applicable	<b>Partition coefficient: n-octanol/water:</b>	Not applicable
<b>Flash point:</b>	572°F (300°C)	<b>Auto-ignition temperature:</b>	>570°F (>299°C)
<b>Evaporation rate:</b>	Not applicable	<b>Decomposition temperature:</b>	392°F (200°C)
<b>Flammability (solid, gas):</b>	Polymer dust is combustible	<b>Viscosity:</b>	Not applicable
<b>Explosive Properties:</b>	High concentrations of dust in the presence of an ignition source could result in a dust explosion.	<b>Oxidizing Properties:</b>	None

**9.2 Other Information:** None available

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity:** None known.

**10.2 Chemical Stability:** Stable

**10.3 Possibility of Hazardous Reactions:** None known.

**10.4 Conditions to Avoid:** Avoid heat, sparks, flames and all other sources of ignition. Avoid hygroscopic conditions and dust formation. Avoid excessive heat (temperatures greater than 392°F (200°C)).

**10.5 Incompatible materials:** Oxidizing agents.

**10.6 Hazardous Decomposition Products:** Thermal decomposition may release carbon oxides and methyl methacrylate.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects:

**Potential Health Effects:**

Eyes: Dust may cause mechanical irritation with redness and tearing.

Skin: Dust may cause irritation, redness, rash and swelling. May cause skin sensitization in sensitive individuals.

<u>Ingestion:</u> May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
<u>Inhalation:</u> Inhalation of dust may cause irritation of the nose, throat and upper respiratory tract.
<b>Chronic Health Effects:</b> Prolonged or repeated overexposure may cause skin irritation or sensitization in some individuals.
<b>Irritation:</b> Benzoyl Peroxide: Not irritating to rabbit skin and was moderately irritating to rabbit eyes after 24 hours. This product is not expected to cause eye or skin irritation.
<b>Corrosivity:</b> No data available. This product is not expected to be corrosive.
<b>Sensitization:</b> Benzoyl Peroxide: Benzoyl peroxide was found to be sensitizing in a mouse local lymphnode assay (LLNA). Individuals with sensitivity to methacrylates may develop an allergic reaction.
<b>Carcinogenicity:</b> None of the components of this product are listed as carcinogens by OSHA, IARC, NTP, ACGIH or the EU Substances Directive.
<b>Mutagenicity:</b> No data available.
<b>Medical Conditions Aggravated by Exposure:</b> Individuals with pre-existing skin and respiratory disorders may be at increased risk from exposure.
<b>Acute Toxicity Data:</b> Polymethylmethacrylate: No toxicity data available. Benzoyl Peroxide: Oral rat LD50 ->5,000 mg/kg; Inhalation rat LD50 ->24.3 mg/L/4hr
<b>Reproductive Toxicity Data:</b> No data available
<b>Specific Target Organ Toxicity (STOT):</b> <u>Single Exposure:</u> No data available <u>Repeated Exposure:</u> No data available

## 12. ECOLOGICAL INFORMATION

<b>12.1 Toxicity:</b> Benzoyl Peroxide: 96 hr LC50 Rainbow Trout – 0.0602 mg/L; 48 hr EC50 Daphnia magna- 0.0602 mg/L
<b>12.2 Persistence and Degradability:</b> Benzoyl Peroxide: Readily biodegradable in screening tests – 68% in 28 days. This product is expected to not be biodegradable.
<b>12.3 Bio-accumulative Potential:</b> No data available
<b>12.4 Mobility in Soil:</b> No data is available
<b>12.5 Results of PBT and vPvB Assessment:</b> Not required
<b>12.6 Other Adverse Effects:</b> None known

## 13. DISPOSAL CONSIDERATIONS

<b>13.1 Waste Treatment Methods:</b>
<b>Regulations:</b> Dispose in accordance with all national and local regulations.
<b>Properties (Physical/Chemical) Affecting Disposal:</b> Empty containers retain product residues and may be hazardous. Follow all SDS precautions when handling empty containers.



**Waste Treatment Recommendations:** Dispose in accordance with national and local regulations.

## 14. TRANSPORT INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
<b>DOT</b>	None	Not Regulated	None	None	Not applicable
<b>ADR/RID</b>	None	Not Regulated	None	None	Not applicable
<b>IMDG</b>	None	Not Regulated	None	None	Not applicable
<b>IATA/ICAO</b>	None	Not Regulated	None	None	Not applicable

**14.6 Special Precautions for User:** Not applicable.

**14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable.

## 15. REGULATORY INFORMATION

**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:**

### U.S. Federal Regulations

**Comprehensive Environmental Response and Liability Act of 1980 (CERCLA):** This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**Toxic Substances Control Act (TSCA):** This product is a medical device and not subject to chemical notification requirements.

**Clean Water Act (CWA):** This material is not regulated under the Clean Water Act.

**Clean Air Act (CAA):** This material is not regulated under the Clean Air Act.

**Superfund Amendments and Reauthorization Act (SARA) Title III Information:**

**SARA Section 311/312 (40 CFR 370) Hazard Categories:**

<b>Immediate Hazard:</b>	Yes	<b>Pressure Hazard:</b>	No
<b>Delayed Hazard:</b>	No	<b>Reactivity Hazard:</b>	No
<b>Fire Hazard:</b>	No		

**This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):**

Components	C.A.S. #	WT %
None		

### State Regulations

**California:** This product contains the following substances known to the state of California to cause cancer and/or reproductive toxicity:

Components	C.A.S. #	WT %
Titanium Dioxide	13463-67-7	<0.1%

### International Regulations

**Canadian Workplace Hazardous Materials Information System (WHMIS):** Medical devices are not subject to WHMIS.

**Canadian Environmental Protection Act:** This product is a medical device and not subject to chemical notification requirements.

This SDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the SDS contains all of the information required by the CPR.

**European Inventory of Existing Chemicals (EINECS):** This product is a medical device and not subject to chemical notification requirements.

**EU REACH:** This product is a medical device and not subject to chemical notification requirements.

**Australian Inventory of Chemical Substances:** This product is a medical device and not subject to chemical notification requirements.

**China Inventory of Existing Chemicals and Chemical Substances:** This product is a medical device and not subject to chemical notification requirements.

**Korean Existing Chemicals List:** This product is a medical device and not subject to chemical notification requirements.

**Philippine Inventory of Chemicals and Chemical Substances:** This product is a medical device and not subject to chemical notification requirements.

**15.2 Chemical Safety Assessment:** None required.

## 16. OTHER INFORMATION

HMIS Hazard Rating:

Health – 2      Flammability – 2      Physical Hazard – 0

Full text of Classification abbreviations used in Section 2 and 3:

E Explosive

O Oxidizing

Xi Irritant

R3 Extreme risk of explosion by shock, friction, fire or others sources of ignition.

R7 May cause fire.

R36 Irritating to the eyes.

R43 May cause sensitization by skin contact.

Eye Irrit. 2A Eye Irritant Category 2A

Org. Perox. Type B Organic Peroxide Category Type B

Skin Sens. 1 Skin Sensitizer Category 1

H241 Heating may cause a fire or explosion.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

Supersedes: 16 March 2011

Revision Summary: Converted MSDS to Reach SDS. Updated all sections.

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau,

ESIS, Country websites for occupational exposure limits.

# Dentsply Lucitone 199 Powder

Dentsply Sirona Pty Ltd

Chemwatch Hazard Alert Code: 2

Chemwatch: 4993-48

Version No: 4.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Issue Date: 01/11/2019

Print Date: 20/04/2020

S.GHS.AUS.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### Product Identifier

Product name	Dentsply Lucitone 199 Powder
Synonyms	?
Other means of identification	Not Available

### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Denture acrylic resin.
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### Details of the supplier of the safety data sheet

Registered company name	Dentsply Sirona Pty Ltd
Address	11-21 Gilby Road Mount Waverley VIC 3149 Australia
Telephone	1300 55 29 29
Fax	1300 55 31 31
Website	www.dentsplysirona.com.au
Email	clientservices@dentsplysirona.com

### Emergency telephone number

Association / Organisation	Dentsply Sirona Pty Ltd
Emergency telephone numbers	1300 55 29 29
Other emergency telephone numbers	Not Available

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

**NON-HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.**

### CHEMWATCH HAZARD RATINGS

	Min	Max	
Flammability	1	1	0 = Minimum 1 = Low 2 = Moderate 3 = High 4 = Extreme
Toxicity	0	0	
Body Contact	2	2	
Reactivity	1	1	
Chronic	0	0	

Poisons Schedule	Not Applicable
Classification [1]	Not Applicable

### Label elements

Hazard pictogram(s)	Not Applicable
SIGNAL WORD	<b>NOT APPLICABLE</b>

### Hazard statement(s)

Not Applicable

### Precautionary statement(s) Prevention

Not Applicable

### Precautionary statement(s) Response

Not Applicable

### Precautionary statement(s) Storage

Not Applicable

### Precautionary statement(s) Disposal

Not Applicable

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

See section below for composition of Mixtures

### Mixtures

CAS No	%[weight]	Name
94-36-0	<0.2	<u>dibenzoyl peroxide</u>
13463-67-7	<0.05	<u>titanium dioxide</u>

## SECTION 4 FIRST AID MEASURES

### Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Transport to hospital or doctor without delay.</li> </ul>

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

Treat symptomatically.

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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### Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.</li> <li>▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).</li> <li>▶ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.</li> <li>▶ Hot organic vapours or mist are capable of sudden spontaneous combustion when mixed with air even at temperatures below their published autoignition temperatures.</li> <li>▶ The temperature of ignition decreases with increasing vapour volume and vapour/air contact times and is influenced by pressure change.</li> <li>▶ Ignition may occur under elevated-temperature process conditions especially in processes performed under vacuum subjected to sudden ingress of air or in processes performed at elevated pressure, where sudden escape of vapours or mists to the atmosphere occurs.</li> </ul> <p>Combustion products include: carbon dioxide (CO<sub>2</sub>) other pyrolysis products typical of burning organic material. May emit poisonous fumes.</p>

	May emit corrosive fumes.
<b>HAZCHEM</b>	Not Applicable

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

<b>Minor Spills</b>	Slippery when spilt. <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing dust and contact with skin and eyes.</li> <li>▶ Wear protective clothing, gloves, safety glasses and dust respirator.</li> <li>▶ Use dry clean up procedures and avoid generating dust.</li> </ul>
<b>Major Spills</b>	Slippery when spilt. Moderate hazard. <ul style="list-style-type: none"> <li>▶ <b>CAUTION:</b> Advise personnel in area.</li> <li>▶ Alert Emergency Services and tell them location and nature of hazard.</li> <li>▶ Control personal contact by wearing protective clothing.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Keep dry.</li> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ No smoking, naked lights or ignition sources.</li> </ul>

### Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	Avoid strong bases, amines, alkalis. <ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> </ul>

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	dibenzoyl peroxide	Benzoyl peroxide	5 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	titanium dioxide	Titanium dioxide	10 mg/m3	Not Available	Not Available	(a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.

#### EMERGENCY LIMITS


Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
dibenzoyl peroxide	Benzoyl peroxide	15 mg/m3	1,200 mg/m3	7,000 mg/m3
titanium dioxide	Titanium oxide; (Titanium dioxide)	30 mg/m3	330 mg/m3	2,000 mg/m3

Ingredient	Original IDLH	Revised IDLH
dibenzoyl peroxide	1,500 mg/m3	Not Available
titanium dioxide	5,000 mg/m3	Not Available

### Exposure controls

<b>Appropriate engineering controls</b>	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
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## Dentsply Lucitone 199 Powder

<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<p>Dust mask will provide additional protection.</p> <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C. apron.</li> <li>▶ Barrier cream.</li> </ul>

**Respiratory protection**

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	- -	PAPR-P1 -
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

\* - Negative pressure demand \*\* - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Appearance</b>	Pink, free flowing paste with characteristic odour; does not mix with		
<b>Physical state</b>	Divided Solid	<b>Relative density (Water = 1)</b>	Not Available
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	>300
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature</b>	200
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Applicable
<b>Initial boiling point and boiling range (°C)</b>	Not Applicable	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	304 (tcc)	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Applicable	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Applicable
<b>Lower Explosive Limit (%)</b>	20g/m3	<b>Volatile Component (%vol)</b>	Not Applicable
<b>Vapour pressure (kPa)</b>	Not Applicable	<b>Gas group</b>	Not Available
<b>Solubility in water</b>	Immiscible	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	Not Applicable	<b>VOC g/L</b>	Not Available

**SECTION 10 STABILITY AND REACTIVITY**

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7

<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

<b>Inhaled</b>	There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.
<b>Ingestion</b>	The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
<b>Skin Contact</b>	Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
<b>Eye</b>	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
<b>Chronic</b>	Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung. There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

	TOXICITY	IRRITATION
<b>Dentsply Lucitone 199 Powder</b>	Not Available	Not Available
<b>dibenzoyl peroxide</b>	dermal (mammal) LD50: >1000 mg/kg <sup>[2]</sup> Oral (rat) LD50: 6400 mg/kg <sup>[2]</sup>	Eye (rabbit): 500 mg/24h - mild Skin effects (MAK): very weak
<b>titanium dioxide</b>	dermal (hamster) LD50: >=10000 mg/kg <sup>[2]</sup> Oral (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin (human): 0.3 mg /3D (int)-mild * Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

<b>DIBENZOYL PEROXIDE</b>	<p>The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important.</p> <p>The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>Benzoyl peroxide may cause double vision, breathing problems, excess saliva and tear formation, redness of the skin and changes in motor activity. It did not produce blood or biochemical adverse effects, gene mutation or evidence of cancer. Repeated oral administration may result in decreased weights of testes and the newborn.</p> <p>The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.</p>
<b>TITANIUM DIOXIDE</b>	<p>* IUCLID Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation.</p> <p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.</p> <p>Exposure to titanium dioxide is via inhalation, swallowing or skin contact. When inhaled, it may deposit in lung tissue and lymph nodes causing dysfunction of the lungs and immune system. Absorption by the stomach and intestines depends on the size of the particle. It penetrated only the outermost layer of the skin, suggesting that healthy skin may be an effective barrier. There is no substantive data on genetic damage, though cases have been reported in experimental animals. No significant acute toxicological data identified in literature search.</p> <p>The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p><b>WARNING:</b> This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.</p>



Dentsply Lucitone 199 Powder

<b>DIBENZOYL PEROXIDE &amp; TITANIUM DIOXIDE</b>	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.		
<b>Acute Toxicity</b>	✗	<b>Carcinogenicity</b>	✗
<b>Skin Irritation/Corrosion</b>	✗	<b>Reproductivity</b>	✗
<b>Serious Eye Damage/Irritation</b>	✗	<b>STOT - Single Exposure</b>	✗
<b>Respiratory or Skin sensitisation</b>	✗	<b>STOT - Repeated Exposure</b>	✗
<b>Mutagenicity</b>	✗	<b>Aspiration Hazard</b>	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Dentsply Lucitone 199 Powder	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available

dibenzoyl peroxide	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.06mg/L	2
	EC50	48	Crustacea	0.11mg/L	2
	EC50	72	Algae or other aquatic plants	0.042mg/L	2
	NOEC	72	Algae or other aquatic plants	0.02mg/L	2

titanium dioxide	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	>1-mg/L	2
	EC50	48	Crustacea	>1-mg/L	2
	EC50	72	Algae or other aquatic plants	5.83mg/L	4
	NOEC	336	Fish	0.089mg/L	4

**Legend:** Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
dibenzoyl peroxide	LOW (Half-life = 14 days)	LOW (Half-life = 21.25 days)
titanium dioxide	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
dibenzoyl peroxide	LOW (LogKOW = 3.46)
titanium dioxide	LOW (BCF = 10)

Mobility in soil

Ingredient	Mobility
dibenzoyl peroxide	LOW (KOC = 771)
titanium dioxide	LOW (KOC = 23.74)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>▶ Recycle wherever possible.</li> <li>▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.</li> <li>▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material)</li> <li>▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.</li> </ul>
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**SECTION 14 TRANSPORT INFORMATION****Labels Required**

<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	Not Applicable

**Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**SECTION 15 REGULATORY INFORMATION****Safety, health and environmental regulations / legislation specific for the substance or mixture****DIBENZOYL PEROXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4
Australia Inventory of Chemical Substances (AICS)	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

**TITANIUM DIOXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Inventory of Chemical Substances (AICS)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans
Chemical Footprint Project - Chemicals of High Concern List	International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	

**National Inventory Status**

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (dibenzoyl peroxide)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	Yes
<b>Legend:</b>	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

**SECTION 16 OTHER INFORMATION**

<b>Revision Date</b>	01/11/2019
<b>Initial Date</b>	01/11/2009

**SDS Version Summary**

Version	Issue Date	Sections Updated
4.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification

**Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

**Definitions and abbreviations**

PC—TWA: Permissible Concentration-Time Weighted Average  
PC—STEL: Permissible Concentration-Short Term Exposure Limit  
IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit.  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

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