

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:

| GHS Classification: | | |
|-----------------------------------|---------------|---------------|
| Health | Environmental | Physical |
| 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:

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

| | |
|------------------|--|
| Ingestion | 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. |
|------------------|--|

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:

| EYES/FACE | HANDS | RESPIRATORY | SKIN |
|---|---|--------------------|-------------|
|  |  | | |

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 ³ (respirable), 15 mg/m ³ (total dust) TWA OSHA PEL (As PNOC) |
| | Germany | 4 mg/m ³ 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 ³ TWA ACGIH TLV 5 mg/m ³ TWA OSHA PEL |
| | Germany | 5 mg/m ³ TWA (Inhalable), 5 mg/m ³ STEL (Inhalable) DFG MAK |
| | United Kingdom | 5 mg/m ³ TWA UK WEL |
| | European Union | Belgium: 5 mg/m ³ 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:

| | | | |
|---|---|--|---|
| Appearance: | Pink free flowing powder | Explosive limits: | LEL: 20 g/m ³ UEL: Not determined |
| Odor: | Faint methacrylate odor | Vapor pressure (mmHg): | Not applicable |
| Odor threshold: | Not determined | Vapor density: | Not applicable |
| pH: | Not applicable | Relative density: | Not determined |
| Melting/freezing point: | Not applicable | Solubility(ies): | Not soluble |
| Initial boiling point and boiling range: | Not applicable | Partition coefficient: n-octanol/water: | Not applicable |
| Flash point: | 572°F (300°C) | Auto-ignition temperature: | >570°F (>299°C) |
| Evaporation rate: | Not applicable | Decomposition temperature: | 392°F (200°C) |
| Flammability (solid, gas): | Polymer dust is combustible | Viscosity: | Not applicable |
| Explosive Properties: | High concentrations of dust in the presence of an ignition source could result in a dust explosion. | Oxidizing Properties: | 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.

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|--|
| <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. |
| Chronic Health Effects : Prolonged or repeated overexposure may cause skin irritation or sensitization in some individuals. |
| Irritation : 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. |
| Corrosivity : No data available. This product is not expected to be corrosive. |
| Sensitization : 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. |
| Carcinogenicity : None of the components of this product are listed as carcinogens by OSHA, IARC, NTP, ACGIH or the EU Substances Directive. |
| Mutagenicity : No data available. |
| Medical Conditions Aggravated by Exposure : Individuals with pre-existing skin and respiratory disorders may be at increased risk from exposure. |
| Acute Toxicity Data : Polymethylmethacrylate: No toxicity data available. Benzoyl Peroxide: Oral rat LD50 ->5,000 mg/kg; Inhalation rat LD50 ->24.3 mg/L/4hr |
| Reproductive Toxicity Data : No data available |
| Specific Target Organ Toxicity (STOT) : <u>Single Exposure</u> : No data available <u>Repeated Exposure</u> : No data available |

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

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|--|
| 13.1 Waste Treatment Methods : |
| Regulations : Dispose in accordance with all national and local regulations. |
| Properties (Physical/Chemical) Affecting Disposal : 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 |
|------------------|----------------|------------------------------|----------------------|--------------------|----------------------------|
| DOT | None | Not Regulated | None | None | Not applicable |
| ADR/RID | None | Not Regulated | None | None | Not applicable |
| IMDG | None | Not Regulated | None | None | Not applicable |
| IATA/ICAO | 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:

| | | | |
|--------------------------|-----|---------------------------|----|
| Immediate Hazard: | Yes | Pressure Hazard: | No |
| Delayed Hazard: | No | Reactivity Hazard: | No |
| Fire Hazard: | 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 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:

| GHS Classification: | | |
|-----------------------------------|---------------|---------------|
| Health | Environmental | Physical |
| 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:

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

| | |
|------------------|--|
| Ingestion | 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. |
|------------------|--|

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:

| EYES/FACE | HANDS | RESPIRATORY | SKIN |
|---|---|--------------------|-------------|
|  |  | | |

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 ³ (respirable), 15 mg/m ³ (total dust) TWA OSHA PEL (As PNOC) |
| | Germany | 4 mg/m ³ 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 ³ TWA ACGIH TLV 5 mg/m ³ TWA OSHA PEL |
| | Germany | 5 mg/m ³ TWA (Inhalable), 5 mg/m ³ STEL (Inhalable) DFG MAK |
| | United Kingdom | 5 mg/m ³ TWA UK WEL |
| | European Union | Belgium: 5 mg/m ³ 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:

| | | | |
|---|---|--|---|
| Appearance: | Pink free flowing powder | Explosive limits: | LEL: 20 g/m ³ UEL: Not determined |
| Odor: | Faint methacrylate odor | Vapor pressure (mmHg): | Not applicable |
| Odor threshold: | Not determined | Vapor density: | Not applicable |
| pH: | Not applicable | Relative density: | Not determined |
| Melting/freezing point: | Not applicable | Solubility(ies): | Not soluble |
| Initial boiling point and boiling range: | Not applicable | Partition coefficient: n-octanol/water: | Not applicable |
| Flash point: | 572°F (300°C) | Auto-ignition temperature: | >570°F (>299°C) |
| Evaporation rate: | Not applicable | Decomposition temperature: | 392°F (200°C) |
| Flammability (solid, gas): | Polymer dust is combustible | Viscosity: | Not applicable |
| Explosive Properties: | High concentrations of dust in the presence of an ignition source could result in a dust explosion. | Oxidizing Properties: | 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.

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|--|
| <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. |
| Chronic Health Effects : Prolonged or repeated overexposure may cause skin irritation or sensitization in some individuals. |
| Irritation : 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. |
| Corrosivity : No data available. This product is not expected to be corrosive. |
| Sensitization : 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. |
| Carcinogenicity : None of the components of this product are listed as carcinogens by OSHA, IARC, NTP, ACGIH or the EU Substances Directive. |
| Mutagenicity : No data available. |
| Medical Conditions Aggravated by Exposure : Individuals with pre-existing skin and respiratory disorders may be at increased risk from exposure. |
| Acute Toxicity Data : Polymethylmethacrylate: No toxicity data available. Benzoyl Peroxide: Oral rat LD50 ->5,000 mg/kg; Inhalation rat LD50 ->24.3 mg/L/4hr |
| Reproductive Toxicity Data : No data available |
| Specific Target Organ Toxicity (STOT) : <u>Single Exposure</u> : No data available <u>Repeated Exposure</u> : No data available |

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

| |
|--|
| Regulations : Dispose in accordance with all national and local regulations. |
| Properties (Physical/Chemical) Affecting Disposal : 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 |
|------------------|----------------|------------------------------|----------------------|--------------------|----------------------------|
| DOT | None | Not Regulated | None | None | Not applicable |
| ADR/RID | None | Not Regulated | None | None | Not applicable |
| IMDG | None | Not Regulated | None | None | Not applicable |
| IATA/ICAO | 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:

| | | | |
|--------------------------|-----|---------------------------|----|
| Immediate Hazard: | Yes | Pressure Hazard: | No |
| Delayed Hazard: | No | Reactivity Hazard: | No |
| Fire Hazard: | 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.