

SAFETY DATA SHEETS

This SDS packet was issued with item:

070843227

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

070843201 070843219

Section 1 – Identification

Product Name: Patterson Zinc Cement Powder

Product Code: 070843201, 070843219, 070843227

Product Use: Restorative and Prosthodontic in Dentistry

Emergency Phone Numbers: 24-hour Emergency Response Number: 1-(800) 424-9300

Manufacturer: Patterson Companies, Inc.
1031 Mendota Heights Road
St. Paul, MN 55120
Tel: 1-800 328-5536
Fax: 1-651 686-9331
www.pattersoncompanies.com

Section 2 – Hazards Identification

EMERGENCY OVERVIEW

This information is based on findings from related or similar materials.

- H316 – Causes mild skin irritation
- H320 - Cause eye irritation
- Dust may cause irritation to nose, throat, and lungs, which will disappear in 24 hours
- This product may contain particulate, not otherwise classified (Nuisance Dust).
- H400 – Very toxic to aquatic life
- No known OSHA hazards



Potential Health Effects, Signs and Symptoms of Exposure:

Primary Route of Entry Inhalation, skin, and ingestion.

Eye Causes eye irritation

Skin Repeated or prolonged exposure may cause allergic skin rashes.

Ingestion Higher concentration can irritate respiratory system

Inhalation Inhalation of high levels of zinc oxide may result in tightness of chest, metallic taste, coughing, dizziness, fever, chills, headache, nausea, and dry throat. Over exposure may produce symptoms known as metal fume fever or (zinc shakes); an acute, self limiting condition without recognized complications. Symptoms of metal fume fever include chills, fever, muscular pain, nausea, and vomiting. Like any finely divided particulate matter, may cause mechanical irritation to skin and eyes.

Sub-Chronic Effects Chronic exposure may cause respiratory tract irritation with nasopharyngitis and laryngitis.

NOTE: Refer to Section 11, Toxicological Information for Details

Section 3 – Composition/Information on Ingredients

Chemical Identity	CAS Numbers	EINECS#	INCI Name	Exposure OSHA TWA/STEL	Limits ACGIH TWA/STEL	Carcinogen IARC/NTP/OSH A	%
Zinc Oxide	1314-13-2	215-222-5	Zinc Oxide	TWA = 15 mg / m ³	N/E	Not Listed	>99.9

N/E – None

Established

N/R – Not Reviewed

N/DA – No Data Available

N/A – Not Applicable

(items in parenthesis relate to 1999/45/EC)

Zinc Oxide: Danger Symbol – GHS09 (N)

Hazard Statement: H400 (R50/53)

Precautionary Statement: P501 (S60), P273 (S61)

See Section 16 for Hazard and Precautionary Statement Key.

Section 4 – First Aid Measures

First Aid for Eye Immediately flush eyes with plenty of water for at least 15 min. occasionally lifting the upper and lower lids. Get medical help if discomfort persists.

First Aid for Skin Flush skin with plenty of soap and water for at least 15 min. while removing contaminated clothing and shoes. Get medical help if discomfort persists.

First Aid for Ingestion Remove to fresh air. Get medical help if discomfort persists.

First Aid for Inhalation Remove from exposure to fresh air immediately. Get medical help if discomfort persists.

Material Safety Data Sheet

Page 2 of 5

Section 5 – Fire Fighting Measures

Flash Point (°F/°C)	Flammable Limit (vol%)	Auto-ignition Temperature (vol%)
N/A	N/A	N/A

Method:

Extinguishing Media: In case of fire use water spray, dry chemical, carbon dioxide or foam.

Fire Fighting: Non-combustible

Instructions:

Unusual Hazards: Substance is noncombustible.

Section 6 – Accidental Release Measures

Spill or Release Procedures: Shovel or vacuum up spilled product and place in closed container for disposal. Do not flush into sewer, stream, or other bodies of water or soil.

Section 7 – Handling and Storage

Handling: Limit all unnecessary personal contact. Use appropriate PPE when handling. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers. Prevent leakage into the environment.

Storage: Store in a cool, dry place.

Explosion Hazard: None.

Section 8 – Exposure Controls / Personal Protection

Engineering Controls: Mechanical ventilation preferred to keep dust levels down.

Personal Protective Equipment

General: To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132), or European Standard EN166 be conducted before using this product.

Eye/ Face Protection: Use safety eyewear for protection against airborne particulate.

Skin Protection: Use impermeable clothing to prevent any contact with this product, such as gloves, apron, boots, or whole body suit. Recommended to prevent skin irritation in hypersensitive individuals.

Respiratory Protection: In case of insufficient ventilation or extremely dusty environments, wear suitable respiratory equipment.

Section 9 – Physical and Chemical Properties

Appearance	Odor & Odor Threshold	pH	Specific Gravity	Viscosity	% Volatile
White Powder	None	N/A	5.6	N/A	N/A

Boiling Point/ Freezing Point	Decomposition Temperature	Octanol/Water Partitioning Coefficient Log Po/w	Vapor Pressure:	Vapor Density	Evaporation Rate	Ignition	Solubility In Water (20°C)
N/A	N/DA	N/DA	N/A	N/A	N/A	N/A	N/A

Flash Point (°F/°C)	Flammable Limit (vol%)	Auto-ignition Temperature (vol%)
N/A	N/A	N/A

Section 10 – Stability and Reactivity

Stability:

Stable

Hazardous Decomposition Products:

None

Conditions to Avoid: Exposure to moisture or water.

Incompatibility (Materials to Avoid):

Acids / Strong Oxidizers

Hazardous Polymerization:

Will not occur

Date of Issue: 05/01/13

Material Safety Data Sheet

Page 3 of 5

Section 11 – Toxicological Information

Acute Oral Toxicity	Acute Dermal Toxicity	Acute Inhalation Toxicity	Irritation – skin	Irritation – Eye
N/DA	N/DA	N/DA	N/DA	N/ DA

Sensitization	Mutagenicity	Sub-chronic Toxicity
N/ DA	N/DA	N/ DA

Section 12 – Ecological Information

Ecotoxicological Information – very toxic to aquatic life.

Acute Toxicity to Fish	Acute Toxicity to Invertebrates	Acute Toxicity to Algae	Bioconcentration	Toxicity to Sewage Bacteria
N/DA	N/ DA	N/ DA	N/ DA	N/ DA

Chemical Fate Information

Biodegradability	N/DA. This material is not expected to bioaccumulate.
Chemical Oxygen Demand	N/ DA

Section 13 – Disposal Considerations

Dispose of in compliance with governmental regulation (state and federal).

Dispose of container and unused contents in accordance with federal, state and local requirements. For EU Member States, please refer to any relevant Community provisions relating to waste. In their absence, it is useful to remind the user that national or regional provisions may be in force.

Section 14 – Transport Information

DOT (49 CFR 172)	
Proper Shipping Name:	Non-regulated
Identification Number:	N/A
Marine Pollutant:	N/A
Special Provisions:	N/A
Emergency Response Guidebook (ERG) #:	
IATA (DGR):	
Proper Shipping Name:	UN3077, Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide), 9, III
Class or Division:	9
UN or ID Number:	UN3077
Packaging Instructions:	III
Emergency Response Guidance (ICAO)#:	
IMO (IMDG):	
Proper Shipping Name:	UN3077, Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide), 9, III
Class or Division:	9
UN or ID Number:	UN3077
Special Provisions & Stowage/Segregation:	N/A
Emergency Schedule (EmS)#:	N/A
Other Information:	N/A

Section 15 – Regulatory Information

US Federal Regulations

Clean Air Act: HAP/ODS	This product contains the following HAP's or ODS: NONE
Clean Water Act: Priority Pollutant	This product contains the following chemicals listed under the U. S. Clean Water Act Priority Pollutant and Hazardous Substance List: None
FDA: Food Packaging Status	This product has not been cleared by the FDA for use in food packaging and / or other applications as an indirect food-packaging additive.

Date of Issue: 05/01/13

Material Safety Data Sheet

Page 4 of 5

Occupational Safety and Health Act	This product is considered to be hazardous under the OSHA Hazard Communication Standard. It's hazards are: None.
RCRA	This product contains the following chemicals considered to be hazardous waste under RCRA (40 CFR 261). None
SARA Title III: Section 302 (RQ)	This product contains no chemicals regulated under Section 302 as extremely hazardous substances.
SARA Title III: Section 302 (TPQ)	This product contains chemicals regulated under Section 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List): None
SARA Title III: Section 311-312:	This product is considered to be hazardous under the OSHA Hazard Communication Standard and is regulated under Section 311-312 (40 CFR 370). It's hazards are: None
SARA Title III: Section 313:	This product contains the following chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: Zinc Oxide - CAS # 1314-13-2
TSCA Section 8(b): Inventory:	This product does contain chemicals listed on the TSCA inventory or otherwise complies with TSCA pre-manufacture notification requirements. Zinc Oxide – CAS # 1314-13-2
TSCA Significant New Use Rule:	None of the chemicals in this material have a SNUR under TSCA.

State Regulations

CA Right-to-Know Law:	None
California No Significant Risk Rule:	None
MA Right-to-Know Law:	Zinc Oxide – CAS # 1314-13-2
NJ Right-to-Know Law:	Zinc Oxide – CAS # 1314-13-2
PA Right-to-Know Law:	Zinc Oxide – CAS # 1314-13-2
FL Right-to-Know Law:	None
MN Right-to-Know Law:	Zinc Oxide – CAS # 1314-13-2

International Regulations

CDSL: Canadian Inventory (on Canadian Transitional List)	Zinc Oxide – CAS # 1314-13-2 Not controlled under WHMIS.
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Labeling according to EC directives – 1272/2008 {CLP} and 1999/45/EC (items in parenthesis relate to 1999/45/EC)

European Community:	For Zinc Oxide USP (finished product): - DANGER SYMBOLS: GHS09 (N) – Dangerous to the environment - HAZARD STATEMENT: H316 (N/A), H320 (N/A), H400 (R50) - PRECAUTIONARY STATEMENT: P102 (S2), Keep out of reach of children. P261 (S24), Avoid breathing dust/fume/gas mist/vapor sprays. P280 (S36/37/39), Wear protective gloves/clothing/eye protection/face protection. P309+314 (S45), If exposed or you feel unwell, get medical advice/attention. P273 (S61), Avoid release into environment.
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Section 16 – Other Information

EU Classes and Risk / Safety Phrases for Referenced Ingredients (See Section 2):

(items in parenthesis relate to 1999/45/EC) Danger Symbols: GHS09 (N) – Dangerous to the Environment. Hazard Statement: H400 (R50/53), Very toxic to Marine life, may cause long term effects. H316 (N/A), Causes mild skin irritation. H320 (N/A), Causes eye irritation.
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Date of Issue: 05/01/13

Material Safety Data Sheet

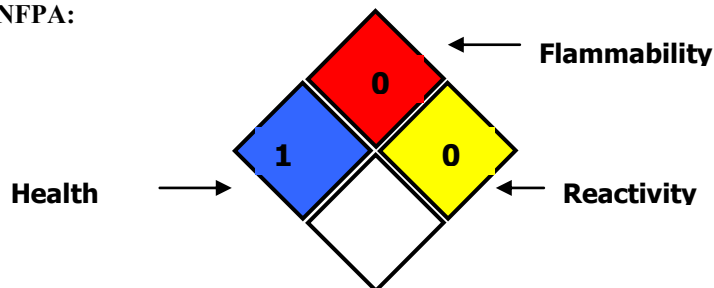
Page 5 of 5

Precautionary Statement:

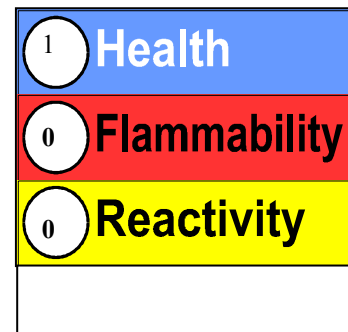
P102 (S2), Keep out of reach of children. **P261 (S24)**, Avoid breathing dust/fume/gas mist/vapor sprays. **P280 (S36/37/39)**, Wear protective gloves/clothing/eye protection/face protection. **P309+314 (S45)**, If exposed or you feel unwell, get medical advice/attention. **P273 (S61)**, Avoid release into environment.

Hazard Rating System (Pictograms)

NFPA:



HMIS:



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Date of Issue: 05/01/13

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 1 of 8

Patterson Zinc Cement Powder

SECTION 1: Identification

Product identifier

Product name: Patterson Zinc Cement Powder

Product code: 070843201, 070843219, 070843227

Recommended use of the product and restriction on use

Relevant identified uses: Restorative and Prosthodontic in Dentistry

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

Supplier

Patterson Companies, Inc.

1031 Mendota Heights Road

St. Paul, MN 55120

1-800-328-5536 Fax:1-651-686-9331

Emergency telephone number:

United States

CHEMTREC

Within USA and Canada: 1-800-424-9300 (CHEMTREC, 24 hours)

Outside USA and Canada: +1-703-527-3887 (CHEMTREC, 24 hours)

SECTION 2: Hazard(s) identification

GHS classification:

Acute aquatic hazard, category 1

Chronic aquatic hazard, category 1

Label elements

Hazard pictograms:



Signal word: Warning

Hazard statements:

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

Precautionary statements:

P273 Avoid release to the environment

P391 Collect spillage

P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 2 of 8

Patterson Zinc Cement Powder

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 1314-13-2	Zinc oxide	>75

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position

Maintain an unobstructed airway

Get medical advice/attention if you feel unwell

After skin contact:

Rinse affected area with soap and water

If symptoms develop or persist, seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

If symptoms develop or persist, seek medical attention

After swallowing:

Rinse mouth thoroughly

Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 3 of 8

Patterson Zinc Cement Powder

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.
Avoid breathing dust.
Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.
Keep container dry.
Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Zinc oxide	1314-13-2	ACGIH TLV TWA 2.0 mg/m ³
	Zinc oxide	1314-13-2	ACGIH TLV TWA 10.0 mg/m ³
United States (OSHA)	Zinc oxide	1314-13-2	OSHA PEL TWA 5 mg/m ³ (Fume)
	Zinc oxide	1314-13-2	OSHA PEL TWA 15 mg/m ³ (Total dust)
	Zinc oxide	1314-13-2	OSHA PEL TWA 5 mg/m ³ (Respirable fraction)
NIOSH	Zinc oxide	1314-13-2	NIOSH REL TWA 5.0 mg/m ³ ; C 15 mg/m ³ (Dust)
	Zinc oxide	1314-13-2	NIOSH REL TWA 5.0 mg/m ³ ; ST 10 mg/m ³ (Fume)

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 4 of 8

Patterson Zinc Cement Powder

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.

Wash hands before breaks and at the end of work.

Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid. [Powder.] White.-Yellow.
Odor	Not determined or not available.
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	5.7 to 5.9
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 5 of 8

Patterson Zinc Cement Powder

Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

None known.

Incompatible materials:

None known.

Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

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

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

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

Product data: No data available.

Substance data: No data available.

Serious eye damage/irritation

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

Product data: No data available.

Substance data: No data available.

Respiratory or skin sensitization

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

Product data: No data available.

Substance data: No data available.

Carcinogenicity

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

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

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

Product data: No data available.

Substance data: No data available.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 6 of 8

Patterson Zinc Cement Powder

Reproductive toxicity

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

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

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

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

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

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

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

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Very toxic to aquatic life

Product data: No data available.

Substance data:

Name	Result
Zinc oxide	Oncorhynchus mykiss (rainbow trout) - 1.1 mg/l - 96.0 h
	Daphnia magna (Water flea) - 0.098 mg/l - 48 h

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 7 of 8

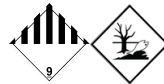
Patterson Zinc Cement Powder

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	UN3077
UN proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant
Special precautions for user	None
Excepted quantities	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN3077
UN proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant
Special precautions for user	None
Excepted quantities	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

1314-13-2	Zinc oxide	Listed
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Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 8 of 8

Patterson Zinc Cement Powder

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

1314-13-2	Zinc oxide	Listed
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CERCLA: Not determined.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

1314-13-2	Zinc oxide	Listed
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New Jersey Right to Know:

1314-13-2	Zinc oxide	Listed
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New York Right to Know:

1314-13-2	Zinc oxide	Listed
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Pennsylvania Right to Know:

1314-13-2	Zinc oxide	Listed
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California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 1-0-0-0

HMIS: 1-0-0-0

Initial preparation date: 11.27.2017

End of Safety Data Sheet

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 1 of 8

Patterson Zinc Cement Powder

SECTION 1: Identification

Product identifier

Product name: Patterson Zinc Cement Powder

Product code: 070843201, 070843219, 070843227

Recommended use of the product and restriction on use

Relevant identified uses: Restorative and Prosthodontic in Dentistry

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

Supplier

Patterson Companies, Inc.

1031 Mendota Heights Road

St. Paul, MN 55120

1-800-328-5536 Fax:1-651-686-9331

Emergency telephone number:

United States

CHEMTREC

Within USA and Canada: 1-800-424-9300 (CHEMTREC, 24 hours)

Outside USA and Canada: +1-703-527-3887 (CHEMTREC, 24 hours)

SECTION 2: Hazard(s) identification

GHS classification:

Acute aquatic hazard, category 1

Chronic aquatic hazard, category 1

Label elements

Hazard pictograms:



Signal word: Warning

Hazard statements:

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

Precautionary statements:

P273 Avoid release to the environment

P391 Collect spillage

P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 2 of 8

Patterson Zinc Cement Powder

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 1314-13-2	Zinc oxide	>75

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position

Maintain an unobstructed airway

Get medical advice/attention if you feel unwell

After skin contact:

Rinse affected area with soap and water

If symptoms develop or persist, seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

If symptoms develop or persist, seek medical attention

After swallowing:

Rinse mouth thoroughly

Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 3 of 8

Patterson Zinc Cement Powder

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.
Avoid breathing dust.
Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.
Keep container dry.
Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Zinc oxide	1314-13-2	ACGIH TLV TWA 2.0 mg/m ³
	Zinc oxide	1314-13-2	ACGIH TLV TWA 10.0 mg/m ³
United States (OSHA)	Zinc oxide	1314-13-2	OSHA PEL TWA 5 mg/m ³ (Fume)
	Zinc oxide	1314-13-2	OSHA PEL TWA 15 mg/m ³ (Total dust)
	Zinc oxide	1314-13-2	OSHA PEL TWA 5 mg/m ³ (Respirable fraction)
NIOSH	Zinc oxide	1314-13-2	NIOSH REL TWA 5.0 mg/m ³ ; C 15 mg/m ³ (Dust)
	Zinc oxide	1314-13-2	NIOSH REL TWA 5.0 mg/m ³ ; ST 10 mg/m ³ (Fume)

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 4 of 8

Patterson Zinc Cement Powder

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid. [Powder.] White.-Yellow.
Odor	Not determined or not available.
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	5.7 to 5.9
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 5 of 8

Patterson Zinc Cement Powder

Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

None known.

Incompatible materials:

None known.

Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

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

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

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

Product data:

No data available.

Substance data: No data available.

Serious eye damage/irritation

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

Product data:

No data available.

Substance data: No data available.

Respiratory or skin sensitization

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

Product data:

No data available.

Substance data: No data available.

Carcinogenicity

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

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 6 of 8

Patterson Zinc Cement Powder

Germ cell mutagenicity

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

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

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

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

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

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

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

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

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

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Very toxic to aquatic life

Product data: No data available.

Substance data:

Name	Result
Zinc oxide	Oncorhynchus mykiss (rainbow trout) - 1.1 mg/l - 96.0 h
	Daphnia magna (Water flea) - 0.098 mg/l - 48 h

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 7 of 8

Patterson Zinc Cement Powder

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	UN3077
UN proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)
UN transport hazard class(es)	9  
Packing group	III
Environmental hazards	Marine Pollutant
Special precautions for user	None
Excepted quantities	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN3077
UN proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)
UN transport hazard class(es)	9  
Packing group	III
Environmental hazards	Marine Pollutant
Special precautions for user	None
Excepted quantities	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 8 of 8

Patterson Zinc Cement Powder

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

1314-13-2	Zinc oxide	Listed
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Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

1314-13-2	Zinc oxide	Listed
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CERCLA: Not determined.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

1314-13-2	Zinc oxide	Listed
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New Jersey Right to Know:

1314-13-2	Zinc oxide	Listed
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New York Right to Know:

1314-13-2	Zinc oxide	Listed
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Pennsylvania Right to Know:

1314-13-2	Zinc oxide	Listed
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California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 1-0-0-0

HMIS: 1-0-0-0

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End of Safety Data Sheet