

## SAFETY DATA SHEETS

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

070830158

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

070830117 070830125 070830166 070830190 070830208 070830232 070830240 070830273 070830281 070830315  
070830323 070900381 074378089 074378097 074378105 074378345 074378352 074378360 074378378 074378386  
074378394 074390118 074390126 074390142 074390159 074390175 074390183 074390209 074390217 074390233  
074390241 074390266 074390274 074390407 074390464 074390472

**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).**

070830083 070830109 070830141 070830182 070830224 070830265 070830307 070900183 070900209 070900217  
070900225 070900241 070900258 070900266 070900282 070900290 070900308 070900324 070900332 070900340  
070900365 070900373 070900407 070900415 070900423



## **MATERIAL SAFETY DATA SHEET**

**Date Revised:** 02/05/2013

**Manufacturer / Supplier**

Patterson Companies, Inc.  
1031 Mendota Heights Road  
St. Paul, MN 55120  
[www.pattersoncompanies.com](http://www.pattersoncompanies.com)

**Telephone:**

(800) 328-5536 (Business Hours)

**Fax:**

(651) 686-9331

**Emergency contact number:**

24-hour Emergency Response Number: (800) 424-9300.

**Product Name: Patterson Admix Alloy Capsules**

**Product Codes:**

070830083, 070830109, 070830117, 070830125, 070830141, 070830158,  
070830166, 070830182, 070830190, 070830208, 070830224, 070830232,  
070830240, 070830265, 070830273, 070830281, 070830307, 070830315,  
070830323

**Recommended use:** For filling of cavitated teeth by dental professionals.

**Patterson Admix Alloy Capsules** are a mixture of Mercury, and Alloy Powder as per the combined MSDSs attached.



---

**MATERIAL SAFETY DATA SHEET**

**Date / Revised:** 02/05/2013

**1. Substance / Preparation and Company name**

**Product Name:** Patterson Mercury

**Recommended use:** For filling of cavitated teeth by dental professionals.

**Manufacturer / Supplier**

Patterson Companies, Inc.  
1031 Mendota Heights Road  
St. Paul, MN 55120  
[www.pattersoncompanies.com](http://www.pattersoncompanies.com)

**Telephone:**

(800) 328-5536 (Business Hours)

**Fax:**

(651) 686-9331

**Emergency contact number:** 24-hour Emergency Response Number: (800) 424-9300.

---

**2. Composition / Information on ingredients**

**For Capsules**

<u>Hazardous ingredients:</u>	<u>Wt. %</u>	<u>CAS No.</u>	<u>EC No.</u>	<u>Index No.</u>
Mercury, metallic (40-50% of total product)	100	7439-97-6	231-106-7	080-001-00

## MATERIAL SAFETY DATA SHEET

Date / Revised: 02/05/2013

Revision: 11

Page 2 of 6

### 3. Hazard Identification:

These products contain mercury. It is toxic if inhaled and acute exposure may cause allergic reactions including dermatitis, digestion and respiratory disorders.

#### California Prop 65 Warning

This product contains mercury, a chemical known to the State of California to cause birth defects or other reproductive harm.

#### Classification according to Directive 790/2009/EC:

	<b>T+</b>	Very toxic
	<b>N</b>	Dangerous for the environment
Risk phrases:	<b>61</b>	May cause harm to the unborn child
	<b>26</b>	Very toxic by inhalation
	<b>48/23</b>	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
	<b>50/53</b>	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases:	<b>45</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	<b>53</b>	Avoid exposure - obtain special instructions before use.
	<b>60</b>	This material and its container must be disposed of as hazardous waste.
	<b>61</b>	Avoid release to the environment. Refer to special instructions/Safety Data Sheet.
	<b>1/2</b>	Keep locked up and out of reach of children
	<b>7</b>	Keep container tightly closed.
	<b>9</b>	Keep container in a well ventilated place.
	<b>36/37/39</b>	Wear suitable protective clothing, gloves and eye/face protection.

### 4. First Aid Measures

General advice:	Contains metallic mercury. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
If inhaled:	Very toxic by inhalation. Remove to fresh air. Seek medical attention. If not breathing give artificial respiration. May cause respiratory disorders including inflammation and fluid retention. Inhalation of mercury vapours at high concentration can cause dyspnea, coughing, fever, severe nausea, vomiting, excess salivation, kidney damage with renal shutdown.
If ingested:	Call a physician immediately. Give large amounts of water.
On skin contact:	Wash skin with soap and water. Remove contaminated clothing. May cause irritation and allergic reaction.
On contact with eyes:	Wash with clear, tepid water. If irritation persists, obtain medical attention. May cause irritation and allergic reaction.

## **MATERIAL SAFETY DATA SHEET**

Date / Revised: 02/05/2013

Revision: 11

Page 3 of 6

---

### **5. Fire Fighting Measures**

- Suitable extinguishing media: As for adjacent fire. Avoid direct water stream. Do not allow water runoff to enter sewers and waterways. Remove product from the fire area if this can be done without risk.
- Special protective equipment: In fires involving large quantities of product, use self-contained breathing apparatus and full protective clothing.
- Further information: Hazardous decomposition products may be produced. (Sec. 10).
- 

### **6. Accidental Release Measures**

- Spillages: Mercury presents a health hazard if incorrectly handled, and is dangerous for the environment. Spillages of mercury should be removed immediately, including from places which are difficult to access. Wearing protective clothing, use a plastic syringe to draw it up. Smaller quantities can be covered by sulphur powder and removed. Avoid inhalation of the vapour.
- Personal precautions: Wear appropriate MSHA approved respirator, gloves, safety goggles and protective clothing to prevent skin contact and inhalation.
- Environmental precautions: Prevent any spillage from entering drains or waterways.
- Methods for cleaning up: Avoid contact with skin and eyes, and avoid inhalation. Pick up with dust pan or method that does not break up mercury into smaller droplets, etc. Store in a sealed plastic container, away from heat and flame, until disposal via an approved Recycler and according to local regulations.
- 

### **7. Handling and storage**

#### Handling

Do not breathe powder and avoid exposed mercury surfaces. Wear appropriate gloves, goggles/face protection and protective clothing to prevent skin contact. Wash thoroughly after handling. Keep away from food, drink and around animal feed stuffs.

#### Storage

Keep container tightly closed and dry. Storage in large quantities (as in warehouse) should be in a ventilated, cool area. Do not store in metal containers. Keep away from sources of ignition and elevated temperatures, recommended <25°C.

#### Distribution

During distribution, to our customers, this product can be transported in non-refrigerated conditions between 15° to 25° C. This product can also withstand temperatures up to 40° C for short periods (2 to 3 days) and intermittent peaks up to 50°C.

---

## MATERIAL SAFETY DATA SHEET

Date / Revised: 02/05/2013

Revision: 11

Page 4 of 6

### 8. Exposure controls and personal protection

8-Hour TWAs: Mercury - 0.025 mg/m<sup>3</sup> (Skin) (ACGIH); 0.05 mg/m<sup>3</sup> (Skin) (OSHA/UK & NOHSC/Australia); 0.1 mg/m<sup>3</sup> (Short term) (Germany);  
Silver - 0.01 mg/m<sup>3</sup> (OSHA/Germany); 0.1 mg/m<sup>3</sup> (ACGIH/U.K. & NOHSC/Australia)  
Tin - 2 mg/m<sup>3</sup> (OSHA/ACGIH/Germany & NOHSC/Australia); 5 mg/m<sup>3</sup> (U.K.);  
Copper - 1 mg/m<sup>3</sup> (OSHA/ACGIH/Germany/UK & NOHSC/Australia)  
Indium - 0.1 mg/m<sup>3</sup> (OSHA/UK & NOHSC/Australia)  
  
Zinc - 1 mg/m<sup>3</sup> (ACGIH)

These levels are not anticipated under foreseeable use conditions.

#### Personal protective equipment

Respiratory equipment: None required under normal use conditions.  
  
Hand protection: Impervious gloves.  
  
Eye protection: Safety goggles.  
  
General safety and hygiene measures: Use only as directed. Wash hands after use.

### 9. Physical and chemical properties

Form and Colour: Silver alloy powder and mercury in separate compartments of a plastic capsule.

Odour:	Odourless
Melting point / melting range:	(Mercury): -38.9°C
Boiling point / boiling range:	(Mercury): 356.6°C
Flash point:	Not applicable
Explosion limits:	Not applicable
Ignition temperature:	Not applicable
Vapour pressure:	(Mercury) 0.0012 mmHg at 20°C
Specific Gravity:	(Mercury) 13.6 g/cm <sup>3</sup>
% Volatiles:	Not applicable
Solubility in water:	Insoluble
Solubility in other solvents:	Insoluble in alcohol
pH value:	Not available
Octanol / water partition coefficient (log POW):	Not determined
Viscosity:	Not determined
Other information:	N/A

## **MATERIAL SAFETY DATA SHEET**

Date / Revised: 02/05/2013

Revision: 11

Page 5 of 6

---

### **10. Stability and Reactivity**

Thermal decomposition: No decomposition under normal conditions

Substance(s) to avoid: Strong oxidizers

Hazardous reactions: Mixtures of mercury with acetylene, ammonia, chlorine dioxide, methyl azide, chlorates, nitrates, or hot sulfuric acid can be explosive. Readily amalgamates with most metals.

Hazardous decomposition products: Slightly volatile at room temperature, atmospheric pressure. When exposed to high temperatures, mercury vaporizes to extremely toxic fumes.

---

### **11. Toxicological information**

Critical hazards to man: Very toxic by inhalation. Toxic - danger of serious damage to health by prolonged exposure through inhalation. Acute exposure may cause allergic reactions including dermatitis, digestion and respiratory disorders. May cause harm to the unborn child..

Critical hazards to the environment: Dangerous for the environment.

None available regarding product. Some information supplied for ingredient(s).

LCLo / Inhalation / Rabbit: (Mercury) 29 mg/m<sup>3</sup>/30 Hour

Chronic Health Effects: Inhalation of mercury vapours, dusts or organic vapours, or skin absorption or mercury over long periods can cause mercurialism. Symptoms include tremors, inflammation of mouth and gums, excessive salivation, stomatitis, blue lines on gums, pain and numbness in extremities, weight loss, mental depression, and nervousness. Exposure may aggravate kidney disorders, chronic respiratory disease and nervous system disorders.

Alloy powder and mercury are in pre-dosed capsules, so the danger of exposure to mercury vapours is low.

---

### **12. Ecological information**

German "Wassergefährdungs Klasse (WGK):3

This product must not enter effluent, ground water, surface water or the soil.

---

## **MATERIAL SAFETY DATA SHEET**

Date / Revised: 02/05/2013

Revision: 11

Page 6 of 6

---

### **13. Disposal considerations**

Product: Dispose of in accordance with local regulations.

***The 1991 Environmental Protection (Duty of Care) Regulations SI No. 2839 and amendments should be noted (United Kingdom).***

---

### **14. Transport information**

IATA and IMDG:

Product: Amalgam Capsule

Contains: Mercury

Proper Shipping Name: Mercury contained in manufactured articles

UN Number: UN 3506

Packing Group: III

Class (sub risk): 8 (6.1) Corrosive & Toxic

IATA Limits: EQ - E0 (not permitted as excepted quantity)

LQ - Forbidden for passenger and cargo aircraft

CAO - no limit

PAX - no limit

IMDG Limits: LQ -5kg

EQ - E0 (not permitted as excepted quantity)

ADR/RID Class: UN 2809

Shipping name: Mercury

Class: 8

Packing Group: III

LQ - 5 kg

---

### **15. Regulatory information**

These products are regulated by:

TGA

Medical Devices Directives 93/42/EEC

FDA

National regulations

---

### **16. Other information**

The information contained in the Material Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.



---

**MATERIAL SAFETY DATA SHEET** [according to GHS & NOHSC: 2011(2003)]

**1. Substance / Preparation and Company name**

Product Name: Patterson Alloy Powder

Recommended use: For filling of cavitated teeth by dental professionals.

**Manufacturer / Supplier**

Patterson Companies, Inc. 1031  
Mendota Heights Road  
St. Paul, MN 55120  
[www.pattersoncompanies.com](http://www.pattersoncompanies.com)

**Telephone:**

(800) 328-5536 (Business Hours)

**Fax:**

(651) 686-9331

**Emergency contact number:** 24-hour Emergency Response Number: (800) 424-9300.

---

**2. Composition / Information on ingredients**

*Alloy Powder*

Non Toxic alloy powder; Non-Hazardous

Ingredients:

Wt. %

CAS No.

Silver	40-70%	7440-22-4
Copper	5-30%	7440-50-8
Tin	20-30%	7440-31-5
Indium	0-0.5%	7440-74-6
Zinc	0-0.5%	7440-66-6

---

**3. Hazard Identification:**

Non-hazardous material

---

**4. First Aid Measures**

If inhaled: Supply fresh air, consult doctor in case of complaints.

If ingested: Rinse out mouth and then drink plenty of water.

On skin contact: Generally the product does not irritate skin.

On contact with eyes: Rinse opened eye for several minutes under running water. Call a physician.

---

---

## 5. Fire Fighting Measures

Suitable extinguishing media: CO<sub>2</sub>, powder or water spray.

Special protective equipment: No special measures required.

---

## 6. Accidental Release Measures

Personal precautions: Not required.

Environmental precautions: Prevent any spillage from entering drains or waterways.

Methods for cleaning up: Pick up mechanically.

---

## 7. Handling and storage

### Handling

Product is intended for dental use only. Observe normal care for working with chemicals. No special measures required.

### Storage

No Special requirements. Protect from humidity and water.

---

## 8. Exposure controls and personal protection

8-Hour TWAs: Silver - 0.01 mg/m<sup>3</sup> (OSHA/Germany); 0.1 mg/m<sup>3</sup> (ACGIH/U.K. & NOHSC/Australia)  
Tin - 2 mg/m<sup>3</sup> (OSHA/ACGIH/Germany & NOHSC/Australia); 5 mg/m<sup>3</sup> (U.K.);  
Copper - 1 mg/m<sup>3</sup> (OSHA/ACGIH/Germany/UK & NOHSC/Australia)  
Indium - 0.1 mg/m<sup>3</sup> (OSHA/UK & NOHSC/Australia)  
Zinc - 1 mg/m<sup>3</sup> (ACGIH)

These levels are not anticipated under foreseeable use conditions.

### **Personal protective equipment**

Respiratory equipment: None required under normal use conditions.

Hand protection: Impervious gloves.

Eye protection: Safety glasses.

General safety and hygiene measures: Use only as directed. Wash hands after use.

---

---

## 9. Physical and chemical properties

Form and Colour:	Powder: Bluish-grey silver alloy powder Tablets: Silver-grey compressed silver alloy powder
Odour:	Odourless
Melting point / melting range:	Undetermined (greater than 500°C)
Boiling point / boiling range:	Undetermined (greater than 500°C)
Flash point:	Not applicable
Explosion limits:	Not applicable
Ignition temperature:	Not applicable
% Volatiles:	Not applicable
Solubility in water:	Insoluble
Solubility in other solvents:	0.0%
Solids content	100%

---

## 10. Stability and Reactivity

Thermal decomposition: No decomposition under normal conditions

Hazardous decomposition products: No hazardous decomposition products known.

---

## 11. Toxicological information

Critical hazards to man: No irritant effect.

Critical hazards to the environment: Not available.

---

## 12. Ecological information

German "Wassergefährdungs Klasse (WGK):3

This product must not enter effluent, ground water, surface water or the soil.

---

## 13. Disposal considerations

Product: Dispose of in accordance with local regulations.

***The 1991 Environmental Protection (Duty of Care) Regulations SI No. 2839 and amendments should be noted (United Kingdom).***

---

## 14. Transport information

Shipping name: None

Dangerous goods class: None

UN/NA Number: None

ADR Number: None

Packing Group: None

Class: None

IATA Limits: N/A

IMDG Limits: N/A

---

## 15. Regulatory information

These products are regulated by:

TGA

Medical Devices Directives 93/42/EEC

FDA

National regulations

---

**16. Other information**

The information contained in the Material Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

**Product:** Patterson Admix and Spherical Alloy Capsules.**Date / Revised:** 01.04.2015**Revision:** 1**1. Identification of the substance/mixture and of the Company/undertaking:**

1.1 Product identifier:

Product Name: Patterson Admix and Spherical Alloy Capsules.

1.2 Relevant identified use:

Relevant use:

Dental professional use: For filling of cavitated teeth by dental professionals.

1.3 Details of the supplier of the Safety Data Sheet:

**Manufacturer / Supplier**

Patterson Companies, Inc.  
1031 Mendota Heights Road  
St. Paul  
MN 55120, USA

**Telephone:**

800 328 5536

**Fax:**

651 686 9331

**Email:**[www.pattersoncompanies.com](http://www.pattersoncompanies.com)**Patterson's 24-Hour Emergency Response Number: 800 424 9300****2. Hazard Identification**

Classification of the substance/mixture:

**SIGNAL WORD: DANGER**

These products contain mercury. It is toxic if inhaled and acute exposure may cause allergic reactions including dermatitis, digestion and respiratory disorders.

**California Prop 65 Warning**

This product contains mercury, a chemical known to the State of California to cause birth defects or other reproductive harm.

**Product:** Patterson Admix and Spherical Alloy Capsules.

**Date / Revised:** 01.04.2015

**Revision:** 1

---

## 2. Hazard Identification continued....

### GHS Classification:

Acute Tox. 2  
Repr. 1B  
STOT RE 1  
Aquatic Acute 1  
Aquatic Chronic 1

Materials are contained in two compartments. However, under normal conditions of use, contact with these materials by the user is generally not expected.

### Hazard statement(s)

H330	Fatal if inhaled.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Precautionary statement(s):

#### Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes/vapours.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P284	Wear respiratory protection.
P280	Wear protective gloves/clothing.
P281	Use personal protective equipment as required.

#### Response:

P304+P340:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P320	Specific treatment is urgent- refer to first aid instructions Section 4.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P321	Specific treatment, refer to First Aid instructions Section 4.
P330	Rinse mouth.
P363	Wash contaminated clothing before re-use.

#### Storage:

P405	Store locked up.
------	------------------

#### Disposal:

P501	Dispose of contents/ container to an approved waste disposal plant.
------	---

---

**Product:** Patterson Admix and Spherical Alloy Capsules.**Date / Revised:** 01.04.2015**Revision:** 1

---

### 3. Composition / Information on ingredients

#### Capsules

<u>Hazardous ingredients:</u>	<u>Wt.%</u>	<u>CAS No.</u>	<u>EC No.</u>	<u>Index No.</u>
Mercury, metallic (40-50% of total product)	100	7439-97-6	231-106-7	080-001-00

Hazard class: Acute Tox. 2, Repr 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1.  
Hazard statement codes: H330, H360D, H372, H400, H410.

---

### 4. First Aid Measures

**General advice:** Contains metallic mercury. In case of accident or if you feel unwell, seek medical advice immediately (show label and instructions for use where possible).

**If inhaled:** Very toxic by inhalation. Remove to fresh air. Seek medical attention. If not breathing give artificial respiration.

May cause respiratory disorders including inflammation and fluid retention. Inhalation of mercury vapours at high concentration can cause dyspnea, coughing, fever, severe nausea, vomiting, excess salivation, kidney damage with renal shutdown.

**If ingested:** Call a physician immediately.  
Rinse mouth and give large amounts of water.

**On skin contact:** Wash skin with soap and water. Remove contaminated clothing. May cause irritation and allergic reaction. If irritation develops, if feeling unwell, or if concerned, get medical advice/attention.

**On contact with eyes:** Do not let victim rub eyes or keep them closed. Extensive irrigation with tepid water is required (at least 15 minutes). Obtain medical advice if irritation persists. May cause irritation and allergic reaction. If irritation develops, if feeling unwell, or if concerned, get medical advice/attention.

**Most important effects, acute and delayed:**

The most important known symptoms and effects are described in section 2 and/or in section 11.

**Indication of any immediate medical attention and special treatment needed:** No data available.

---



**Product:** Patterson Admix and Spherical Alloy Capsules.

**Date / Revised:** 01.04.2015

**Revision:** 1

---

## 5. Fire Fighting Measures

- Suitable extinguishing media: As for adjacent fire. Water spray, Foam, Carbon Dioxide, dry Chemical and other "ABC" Class may be used.
- Special protective equipment: In fires involving large quantities of product, use self-contained breathing apparatus and full protective equipment.
- Unusual Fire and Explosion Hazards: Mercury is not flammable and is relatively stable although it can react with many metals to form amalgams.
- Explosion Sensitivity to Mechanical Impact: Not sensitive.
- Explosion Sensitivity to Static Discharge: Not sensitive.
- Unsuitable extinguishing media: None specified.
- Specific hazards arising from the mixture:  
Mercury vapours generated during fires involving these products are toxic; additionally, this element can be irritating to contaminated tissue. Therefore, this product presents a severe health hazard to firefighters.
- Advice for firefighters: Wear self contained breathing apparatus and full protective equipment.  
Move fire exposed containers, if it can be done without risk to firefighters.  
Apply cooling water to sides of containers that are exposed to flame until well after fire is out.  
Decontaminate all equipment thoroughly after the conclusion of fire-fighting activities. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.
- Further information: Hazardous decomposition products may be produced. (Refer to Section 10).

---

## 6. Accidental Release Measures

- Spillages: Mercury presents a health hazard if incorrectly handled, and is dangerous for the environment. Spillages of mercury should be removed immediately, including from places which are difficult to access.  
Wearing protective clothing, use a plastic syringe to draw it up.  
Smaller quantities can be covered by sulphur powder and removed.  
Avoid inhalation of the vapour.
- Personal precautions: Wear appropriate MSHA approved respirator, gloves, safety goggles and protective clothing to prevent skin contact and inhalation.
- Environmental precautions: Prevent any spillage from entering drains or waterways.
- Methods for cleaning and containment of spills:  
Avoid contact with skin and eyes, and avoid inhalation. Pick up with dust pan or method that does not break up mercury into smaller droplets, etc. Store in a sealed plastic container, away from heat and flame, until disposal via an approved Recycler and according to local regulations. Ensure adequate ventilation.

**Product:** Patterson Admix and Spherical Alloy Capsules.

**Date / Revised:** 01.04.2015

**Revision:** 1

---

## 7. Handling and storage

<u>Handling:</u>	Do not breathe powder and avoid exposed mercury surfaces. Wear appropriate gloves, goggles/face protection and protective clothing to prevent skin contact. Wash thoroughly after handling. Keep away from food, drink and around animal feed stuffs.
<u>Storage:</u>	Store only in unopened original containers. Keep container tightly closed and dry. Storage in large quantities (as in warehouse) should be in a ventilated, cool area. Do not store in metal containers. Keep away from sources of ignition and elevated temperatures, recommended <25°C.
<u>Distribution:</u>	During distribution, to our customers, this product can be transported in non-refrigerated conditions between 15° to 25° C. This product can also withstand temperatures up to 40° C for short periods (2 to 3 days) and intermittent peaks up to 50°C.
Specific end use:	Apart from the use mentioned in section 1.2, there are no other uses for the product.

---

## 8. Exposure controls and personal protection

Control parameters:

Occupational exposure limits:

8-Hour TWAs: Mercury - 0.025 mg/m<sup>3</sup> (Skin) (ACGIH); 0.05 mg/m<sup>3</sup> (Skin) (OSHA/UK & NOHSC/Australia); 0.1 mg/m<sup>3</sup> (Short term) (Germany);

Silver - 0.01 mg/m<sup>3</sup> (OSHA/Germany); 0.1 mg/m<sup>3</sup> (ACGIH/U.K. & NOHSC/Australia)

Tin - 2 mg/m<sup>3</sup> (OSHA/ACGIH/Germany & NOHSC/Australia); 5 mg/m<sup>3</sup> (U.K.);

Copper - 1 mg/m<sup>3</sup> (OSHA/ACGIH/Germany/UK & NOHSC/Australia)

Indium - 0.1 mg/m<sup>3</sup> (OSHA/UK & NOHSC/Australia)

Zinc - 1 mg/m<sup>3</sup> (ACGIH)

These levels are not anticipated under foreseeable use conditions.

### Personal protective equipment

Respiratory equipment: None required under normal use conditions.

Hand protection: Impervious gloves.

Eye protection: Safety goggles.

General safety and hygiene measures: Use only as directed. Wash hands after use.

---

**Product:** Patterson Admix and Spherical Alloy Capsules.**Date / Revised:** 01.04.2015**Revision:** 1

---

**9. Physical and chemical properties**

Form and Colour:	Silver alloy powder and mercury in separate compartments of a plastic capsule. Silver alloy – grey fine metallic powder. Mercury – Silver-white heavy liquid metal.
Odour:	Odourless
Melting point / melting range:	(Mercury): -38.9°C
Boiling point / boiling range:	(Mercury): 356.6°C
Flash point:	Not applicable
Explosion limits:	Not applicable
Ignition temperature:	Not applicable
Vapour pressure:	(Mercury) 0.0012 mmHg at 20°C
Specific Gravity:	(Mercury) 13.6 g/cm <sup>3</sup>
% Volatiles:	Not applicable
Solubility in water:	Insoluble
Solubility in other solvents:	Insoluble in alcohol
pH value:	Not applicable.
Octanol / water partition coefficient (log POW):	Not determined
Viscosity:	Not determined
Relative vapour density (air = 1):	(Mercury): - 6.9
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available

---

**10. Stability and Reactivity**

Reactivity:	No data available.
Chemical Stability:	Stable under recommended storage conditions.
Thermal decomposition:	No decomposition under normal conditions
Substance(s) to avoid:	Strong oxidizers
Hazardous reactions:	Mixtures of mercury with acetylene, ammonia, chlorine dioxide, methyl azide, chlorates, nitrates, or hot sulfuric acid can be explosive. Readily amalgamates with most metals.
Hazardous decomposition products:	Slightly volatile at room temperature, atmospheric pressure. When exposed to high temperatures, mercury vaporizes to extremely toxic fumes.

---

**Product:** Patterson Admix and Spherical Alloy Capsules.**Date / Revised:** 01.04.2015**Revision:** 1

---

**11. Toxicological information**

Critical hazards to man:	Very toxic by inhalation. Toxic - danger of serious damage to health by prolonged exposure through inhalation. Acute exposure may cause allergic reactions including dermatitis, digestion and respiratory disorders. May cause harm to the unborn child.
Critical hazards to the environment:	Dangerous for the environment.
Serious eye damage/irritation:	Irritating to eyes.
Skin corrosion/irritation:	May cause allergic skin reactions. May be irritant or corrosive.
Respiratory or skin sensitisation:	Very toxic by inhalation.
Ingestion:	Very hazardous by ingestion. May cause damage to blood, kidneys, liver, brain, peripheral nervous system, central nervous system.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	Classified A5 (not suspected for human) by ACGIH. 3 (not classifiable for human) by IARC.
None available regarding product.	Some information supplied for ingredient(s).
LCLo / Inhalation / Rabbit:	(Mercury) 29 mg/m <sup>3</sup> /30 Hour
Chronic Health Effects:	Inhalation of mercury vapours, dusts or organic vapours, or skin absorption or mercury over long periods can cause mercurialism. Symptoms include tremors, inflammation of mouth and gums, excessive salivation, stomatitis, blue lines on gums, pain and numbness in extremities, weight loss, mental depression, and nervousness. Exposure may aggravate kidney disorders, chronic respiratory disease and nervous system disorders. May cause damage to blood, kidneys, liver, brain, peripheral nervous system, central nervous system.

Alloy powder and mercury are in pre-dosed capsules, so the danger of exposure to mercury vapours is low.

---

**Product:** Patterson Admix and Spherical Alloy Capsules.**Date / Revised:** 01.04.2015**Revision:** 1**12. Ecological information**

German "Wassergefährdungs Klasse (WGK):3

This product must not enter effluent, ground water, surface water or the soil.

Self-Assessment: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Ecotoxicity: No data available.

Persistence and biodegradability: No data available.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Other adverse effects: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**13. Disposal considerations**

Product: Dispose of in accordance with local and national regulations.

Contaminated packaging: Dispose of contaminated packaging as hazardous waste in accordance with local official regulations.

**14. Transport information**

IATA:

Product: Amalgam Capsule

Contains: Mercury

Proper Shipping Name: Mercury contained in manufactured articles

UN Number: UN 3506

Packing Group: III

Class (sub risk): 8 (6.1) Corrosive & Toxic

IATA Limits: EQ - E0 (not permitted as excepted quantity)

LQ - Forbidden for passenger and cargo aircraft

CAO - no limit

PAX - no limit

Not classified as Dangerous Goods for sea, road and rail transport.

**15. Regulatory information**

**Product:** Patterson Admix and Spherical Alloy Capsules.**Date / Revised:** 01.04.2015**Revision:** 1

---

These products are regulated by: FDA Medical Device Regulations

---

**16. Other information**

**Prepared by:** Patterson Companies, Inc.  
1031 Mendota Heights Road  
St. Paul  
MN 55120, USA

**Telephone:** 800 328 5536

The information contained in the Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

**Date of preparation/revision:** 1<sup>st</sup> April 2015.

---



## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 1 of 9

### Patterson Admix Alloy Capsules (Mercury)

#### SECTION 1: Identification

##### Product identifier

**Product name:** Patterson Admix Alloy Capsules (Mercury)

**Product code:** 070830083 070830109 070830117 070830125

070830141 070830158 070830166 070830182 070830190 070830208

070830224 070830232 070830240 070830265 070830273 070830281

070830307 070830315 070830323 074390381 074390399 074390407

074390456 074390464 074390472

**Additional information:** 074390514 074390522 074390530 070900183

070900209 070900217 070900225 070900241 070900258 070900266

070900282 070900290 070900308 070900324 070900332 070900340

070900365 070900373 070900415 070900423 074378089 074378097

074378105 074378345 074378352 074378360 074378378 074378386

074378394 074390118 074390126 074390142 074390159 074390175

074390183 074390209 074390217 074390233 074390241 074390266

074390274 070900183 070900209 070900217 070900225 070900241

070900258 070900266 070900282 070900290

##### Recommended use of the product and restriction on use

**Relevant identified uses:** Dental professional use: For filling of cavitated teeth by dental professionals.

**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 toxicity (inhalation), category 1

Specific target organ toxicity - repeated exposure, category 1

Reproductive toxicity, category 2

Acute aquatic hazard, category 1

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 2 of 9

## Patterson Admix Alloy Capsules (Mercury)

Chronic aquatic hazard, category 1

### Label elements

#### Hazard pictograms:



**Signal word:** Danger

#### Hazard statements:

H330 Fatal if inhaled

H372 Causes damage to organs through prolonged or repeated exposure

H361 Suspected of damaging fertility or the unborn child

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

#### Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray

P271 Use only outdoors or in a well-ventilated area

P284 Wear respiratory protection

P264 Wash skin thoroughly after handling

P270 Do not eat, drink or smoke when using this product

P201 Obtain special instructions before use

P202 Do not handle until all safety precautions have been read and understood

P281 Use personal protective equipment as required

P273 Avoid release to the environment

P320 Specific treatment is urgent (see ... on this label)

P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician

P308+P313 If exposed or concerned: Get medical advice/attention

P391 Collect spillage

P405 Store locked up

P403+P233 Store in a well ventilated place. Keep container tightly closed

P501 Dispose of contents and container as instructed in Section 13

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7439-97-6	Mercury, metallic (40-50% of total product)	100

**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



## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 3 of 9

### Patterson Admix Alloy Capsules (Mercury)

Get medical advice/attention if you feel unwell  
Take precautions to ensure your own safety  
Remove source of exposure or move person to fresh air and keep comfortable for breathing  
Immediately call a POISON CONTROL CENTER or seek medical attention  
If breathing has stopped, trained personnel should begin rescue breathing  
Avoid mouth-to-mouth contact by using a barrier device  
If the heart has stopped, immediately start cardiopulmonary resuscitation (CPR)

#### 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

#### Special precautions:

Not determined or not applicable.

### 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

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 4 of 9

### Patterson Admix Alloy Capsules (Mercury)

Prevent from reaching drains, sewer or waterway

#### Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

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 mist or vapor.

Do not eat, drink, smoke or use personal products when handling chemical substances.

#### Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.

Protect from freezing and physical damage.

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	Mercury, metallic (40-50% of total product)	7439-97-6	ACGIH TLV (TWA): 0.02 mg/m <sup>3</sup>
United States (OSHA)	Mercury, metallic (40-50% of total product)	7439-97-6	OSHA PEL (TWA): 0.1 mg/m <sup>3</sup>

#### Biological limit values:

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

#### 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:

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 5 of 9

### Patterson Admix Alloy Capsules (Mercury)

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	Silver alloy powder and mercury in separate compartments of a plastic capsule. Silver alloy - grey fine metallic powder. Mercury - Silver-white heavy liquid metal. Odourless
Odor	Not determined or not available.
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	-38.9°C
Initial boiling point/range	(Mercury): 356.6°C
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	(Mercury) 0.0012mm Hg at 20°C
Vapor density	(Mercury) 13.6 g/cm <sup>3</sup>
Density	Not determined or not available.
Relative density	Not determined or not available.
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.
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.

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 6 of 9

### Patterson Admix Alloy Capsules (Mercury)

#### Hazardous decomposition products:

None known.

### SECTION 11: Toxicological information

#### Acute toxicity

**Assessment:** Fatal if inhaled

**Product data:** No data available.

#### Substance data:

Name	Route	Result
Mercury, metallic (40-50% of total product)	oral	LD50 - Rat - 9.2 mg/kg
	inhalation	LC50 - Rat - >26.6 mg/m3

#### 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:

Name	Species	Result
Mercury, metallic (40-50% of total product)		There was some evidence of a carcinogenic activity in male rats based on the increased incidence squamous cell papillomas of the forestomach. Marginally increased incidence of thyroid follicular adenomas and carcinomas may have been related to mercuric chloride. There was equivocal evidence of a carcinogenic activity in female rats based on two squamous cell papillomas of the forestomach, per ECHA.

**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.

#### Reproductive toxicity

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 7 of 9

### Patterson Admix Alloy Capsules (Mercury)

**Assessment:** Suspected of damaging fertility or the unborn child

**Product data:**

No data available.

**Substance data:**

Name	Result
Mercury, metallic (40-50% of total product)	LOEL: 7.5 mg/kg bw/day (nominal) per ECHA

#### 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:** Causes damage to organs through prolonged or repeated exposure

**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
Mercury, metallic (40-50% of total product)	LC50 - Cyprinus carpio - 160 µg/L (96 h)
	NOEC - Pimephales promelas - 0.63 µg/L (32 d)

#### 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

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 8 of 9

### Patterson Admix Alloy Capsules (Mercury)

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

UN number	UN3506
UN proper shipping name	Mercury contained in manufactured articles
UN transport hazard class(es)	8 (6.1)  
Packing group	III
Environmental hazards	None
Special precautions for user	None
Excepted quantities	E0 (Not permitted as expected quantity)
Limited quantity	Forbidden for passenger and Cargo aircraft

### SECTION 15: Regulatory information

#### United States regulations

##### Inventory listing (TSCA):

7439-97-6	Mercury, metallic (40-50% of total product)	Listed
-----------	---	--------

**Significant New Use Rule (TSCA Section 5):** Not determined.

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

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.27.2017

Page 9 of 9

### Patterson Admix Alloy Capsules (Mercury)

**SARA Section 302 extremely hazardous substances:** Not determined.

**SARA Section 313 toxic chemicals:**

7439-97-6	Mercury, metallic (40-50% of total product)	Not Listed
-----------	---	------------

**CERCLA:** Not determined.

**RCRA:** Not determined.

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

**Massachusetts Right to Know:** Not determined.

**New Jersey Right to Know:** Not determined.

**New York Right to Know:** Not determined.

**Pennsylvania Right to Know:** Not determined.

**California Proposition 65:**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

7439-97-6	Mercury, metallic (40-50% of total product)
-----------	---

### 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:** 2-0-0-0

**HMIS:** 2-0-0-0

**Initial preparation date:** 11.27.2017

**End of Safety Data Sheet**