

SAFETY DATA SHEETS

This SDS packet was issued with item:

074096392

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

074096384 074096400 074096418 074096459 074096491

Dentsply Milford Safety Data Sheet

557899

1. Identification

Product Name Unison®	SDS Code Number 557899
Substance Identity Unison® Spherical Alloy (Capsules)	Date of Last Revision 4/18/16
Manufacturer: Dentsply Milford	Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.dentsply.com
Grades or Minor Variant Identities 1, 2, or 3 Spill	Information Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)
Product Use (for Canada) Dental Amalgam Filling Material	Emergency Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)

2. Hazard(s) Identification



Danger
May be Corrosive to Metals



Danger
Toxic if inhaled

Keep only in original container.
Absorb spillage to prevent material damage.
Store in corrosive resistant container, with a resistant inner liner.

Avoid breathing vapours.
Use in a well ventilated area.
IF INHALED: remove to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or Doctor if you feel unwell.



Danger
May cause damage to kidneys and central nervous system through prolonged or repeated exposure

Do not breathe vapours.
May be harmful if swallowed.
Get medical advice if you feel unwell.

3. Composition/Information on Ingredients

Hazardous Components	EC Number	CAS Number	Exposure Limits	%
Silver	231-131-3	7440-22-4	0.1 mg/M ³	33
Tin	231-141-8	7440-31-5	2 mg/M ³	8.5
Copper	231-159-6	7440-50-8	1 mg/M ³	16.5
Mercury	231-106-7	7439-97-6	0.025mg/M ³	42

Mercury is a chemical known to the State of California to cause birth defects or other reproductive harm.

4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	Get medical aid immediately. Do NOT let victim rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).	Do NOT let victim rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).	Not Applicable
Skin	Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.	Not Applicable

	shoes.		
Inhalation	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth to mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.	Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth to mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.	Not Applicable
Ingestion	Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything my mouth to an unconscious person. Get medical aid immediately. Wash mouth out with water.	If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything my mouth to an unconscious person. Get medical aid immediately. Wash mouth out with water. Ingestion of alloy may cause GI tract irritation, nausea or diarrhea. Toxicity; LD ₅₀ >5,000 mg/kg. Low order of toxicity is expected if alloy is ingested.	Not Applicable
Other: Antidote	Not Applicable	The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel. The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel	Not Applicable
Note to Physicians (Treating, Testing and Monitoring): The concentration of Mercury in whole blood is a reasonable measure of the body-burden of mercury and thus is used for monitoring purposes. Treat symptomatically and supportively. Persons with kidney disease, chronic respiratory disease, liver disease, or skin disease may be at increased risk from exposure to this substance.			

5. Fire and Explosion Data

Flashpoint Method: Not Applicable	Flammable (Explosive) Limits in Air LEL: Not Applicable UEL: Not Applicable	Autoignition Temperature: Not Applicable Product will not autoignite.	Other: Not Applicable
Flame Propagation or Burning Rate (for Solids): Not Applicable	Properties Contributing to Fire Intensity: Not Applicable	Flammability Classification: Not Applicable	
Extinguishing Media: Water spray, carbon dioxide, foam, or dry chemical.		Extinguishing Media to Avoid: Water with full jet.	
Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices. Mercury vapors and mercury oxides generated during fires involving this material are toxic; additionally, this element can be irritating to contaminated tissue. Therefore, this material represents a severe health hazard to firefighters. Mercury is not flammable, and is relatively stable (though it can react with many metals to form amalgams). Water can cause environmental damage. Dike and collect water used to fight fire. During a fire, thermal decomposition or combustion may generate irritating and toxic gases.			
Unusual Fire and Explosion Hazards: Incipient fire responders should wear eye protection. Structural firefighters must 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-fighters activities. If possible, if prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.			

6. Accidental Release Measures

Containment Techniques: For small spills, absorb spill with inert material, such as: sand, vermiculite, earth or other absorbent material and place into suitable container. Do not touch spilled material. Avoid runoff into storm sewers and ditches, which lead to waterways. Keep unnecessary people away. Isolate hazard area. Use Protective equipment as in section 8.		
Spill/Leak Clean-up Procedures and Equipment: Clean up spill immediately, using protective equipment as in section 8. Do not touch spilled material. Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into container for disposal. Keep unnecessary people away. Isolate hazard area. Provide ventilation.		
Evacuation Procedures: Not Applicable	Special Instructions: Not Applicable	Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Always keep Mercury stored in a sealed container away from heat. Store away from food and beverages. Product is intended for dental use only. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.
Storage Practices and Warnings: Store only in the original package. Keep package tightly sealed. Store in a cool dry area. Store away from food and beverages. Minimize dust generation and accumulation. Avoid breathing dust and contact with eyes. Observe normal warehouse handling procedures. The avoidance of any air contaminant is always a recommended practice.

8. Exposure Control / Personal Protection



Ventilation: Ensure adequate ventilation, by either natural or mechanical means to keep exposure levels below PEL.		Other Engineering Controls: Not Applicable
Routes of Entry	Personal Protective Equipment (PPE) for Normal Use	PPE for Emergencies
Eye/Face	Safety Glasses	Not Applicable
Skin	The glove material has to be impermeable, resistant to the product and prevent skin exposure. Neoprene gloves are acceptable for routine use.	Not Applicable
Inhalation	Use sufficient natural or mechanical ventilation to keep vapor exposure level below PEL.	Not Applicable
Body Protection	Protective work clothing such as lab coat to prevent skin exposure.	Not Applicable
General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin. Do not eat, drink or smoke when using.		
Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable		Other Protective Measures and Equipment: Not Applicable

9. Physical and Chemical Characteristics

Appearance: Alloy: Grey colored, dry metallic powder. Mercury: Silver liquid.		Odor: None
Normal Physical State: Alloy: Metallic powder. Mercury: Metallic liquid.		Melting Point: Mercury: -39°C (-38°F) Alloy: Approximately 970°C (1778°F)
Specific Gravity: Mercury: 13.6 g/cm ³ Alloy: 9.6 g/cm ³	Solubility in Water: Not soluble	pH: Not Applicable
Vapor Pressure (mm Hg): Mercury: 0.002 mm Hg @ 25°C. Alloy: NA	Vapor Density: Mercury: 6.9 (AIR=1) Alloy: NA	Evaporation Rate (Butyl Acetate =1) Not Applicable Alloy: NA
Other: Not Applicable		

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid) Mercury: Strong oxidizing materials. Oxygen, Sulfur, acetylene, ammonia, chlorine dioxide, azides, chlorates, nitrates, sulfuric acid, halogens, Rubidium, Calcium, 3-bromopropyne, ethylene oxide, Lithium, methylsilane + oxygen, peroxyformic acid, tetracarbonylnickel +oxygen, Copper, copper alloys, boron diiodophosphide, metals, nitromethane, sodium carbide, Aluminum, Lead, Iron, and metal oxides. Alloy: Strong mineral acids, hydrogen peroxide, acetylene, and ethylenimine.		
Hazardous Products Produced During Decomposition: Mercury vapors and mercury oxides generated during fires involving this material are toxic; additionally, this element can be irritating to contaminated tissue. Therefore, this material represents a severe health hazard to firefighters. Mercury is not flammable, and is relatively stable (though it can react with many metals to form amalgams).		
Hazardous Polymerization: ☐ May Occur ☒ May Not Occur	Conditions to Avoid: Excessive heat. Material will readily vaporize.	
Stability? ☒ Stable ☐ Unstable	Conditions to Avoid: None known	

11.Toxicological Information

Mercury: Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Carcinogenicity: NTP?: Not listed IARC monographs?: No OSHA regulated?: No. Epidemiology: Intraperitoneal, rat: TDLo=400mg/Kg/14D-I (Tumorigenic-equivocal tumorigenic agent by RTECS criteria – tumors at site of application. Teratogenicity: Inhalation, rat: TCLo = 1mg/M3/24Hr (female 1-20days after conception) Effects on Embryo or Fetus – fetotoxicity (except death, e.g. stunted fetus). Reproductive Effects: Inhalation, rat: TCLo = 890 ng/M3/24Hr (male 16 pre-mating) Paternal Effects – spermatogenesis (including genetic material, sperm morphology, motility, and count. Inhalation, rat: TCLo = 7440ng/M3/24 Hr (male 16 weeks pre-mating) Fertility- post-implantation mortality (e.g. dead and/or resorbed implants per total numbers of implants). Mutagenicity: Cytogenetic Analysis: Unreported, man = 150 µg/M3. Neurotoxicity: The brain is the critical organ in humans for chronic vapor exposure; in severe cases, spontaneous degeneration of the brain cortex can occur as a late sequela to past exposure. Alloy: Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Product not considered hazardous. TOXICITY: LD ₅₀ >5,000 mg/kg.	
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12.Ecological Information



Danger

Very Toxic to aquatic life with long lasting effects

Avoid release to the environment

Collect spillage

Mercury: Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Mercury is Toxic and Dangerous to the Environment. Do not allow Mercury to be released into streams or waterways. Eco Toxicity: Fish: Rainbow Trout LC ₅₀ = 0.16-0.90 mg/L; 96 Hr; Unspecified Fish: Bluegill/Sunfish: LC ₅₀ = 0.16-0.90 mg/L; 96 Hr; Unspecified Fish: Channel catfish: LC ₅₀ = 0.35 mg/L; 96 Hr.; Unspecified Water Flea Daphnia: EC ₅₀ = 0.01 mg/L; 48 Hr; Unspecified. In aquatic systems, mercury appears to bind to dissolved matter or fine particulates, while the transport of mercury bound to dust particles in the atmosphere or bed sediments in rivers and lakes is generally less substantial. The conversion, in aquatic environments, of inorganic elemental mercury to methyl mercury implies that recycling of mercury from sediment to water to air and back could be a rapid process. Environmental: Mercury bio accumulates and concentrates in food chain (concentration may be as much as 10,000 times that of water). Bio concentration factors of 63,000 for freshwater fish and 10,000 for saltwater fish have been found. Much of the mercury deposited on land appears to revaporize within a day or two, at least in areas substantially heated by sunlight. Physical: All forms of mercury (metal, vapor, inorganic, or organic) are converted to methyl mercury. Inorganic forms are converted by microbial action in the atmosphere to methyl mercury. Alloy: Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Product not considered hazardous.

13.Disposal Considerations

Mercury: Regulations: Do not incinerate or place in landfills, return to reclamation centers. Mercury may be salvaged or reclaimed for reuse. Dispose of in accordance with Federal, State and Local regulations. Alloy: Regulations: The product or individual components may be salvaged or reclaimed for reuse. Dispose of material as solid waste in a closed container. Dispose of in accordance with Federal, State and Local regulations. Pick up powder by carefully sweeping, vacuuming or wet mopping spilled material into an acceptable closed waste container. Avoid generating airborne dust.
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RCRA P – Series Hazardous Waste Code: None Listed
 RCRA U-Series Hazardous Waste Code for Mercury: U151

14. Transport Information



Properties (Physical/Chemical) Affecting Disposal:		
Regulated for Shipping: Yes	DOT Shipping Name: Mercury contained in manufactured articles	Packing Group: III
Do Changes in Quantities, packaging, or shipment method change product classification? Yes, Over 1 pound RQ – Reportable Quantity	DOT Hazard Class: 8	UN Number: 3506
DOT Labels Required (49CFR172.101): Yes, Over 1 pound RQ – Reportable Quantity, Corrosive Label	Other: Not Applicable	
IATA Shipping Name: Mercury contained in manufactured articles	IATA Hazard Class: 8 Sub Risk 6.1	UN Number: 3506
IATA Hazard Labels Required: Reportable Quantity, Corrosive Label		
IMDG Shipping Name: Mercury contained in manufactured articles	IMDG Hazard Class: 8	UN Number: 3506
IMDG Hazard Labels Required: Yes, Over 1 pound RQ – Reportable Quantity, Corrosive Label		

15.Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.	
U.S. Federal Regulations: CERCLA 103 Reportable Quantity: RQ is 1 pound for Mercury. Report spills required under federal, state and local regulations	
EPCRA Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): Mercury. The Reportable Quantity RQ is 1 pound for Mercury.	
EPCRA Section 302 Extremely Hazardous Substances EHS (TPQ): None	
Clean Air Act section 112r: Mercury is considered as a hazardous air pollutant. (HAP).	
Clean Water Act: Mercury is not listed as a Hazardous Substance under the CWA. Mercury is listed as a Priority Pollutant under the CWA. Mercury is listed as a Toxic Pollutant under the CWA.	
OSHA: OSHA does not consider Mercury highly hazardous.	
RCRA P – Series Hazardous Waste Code: None Listed	
RCRA U-Series Hazardous Waste Code for Mercury: U151	
EPA Toxic Substances Control Act (TSCA) Status: Mercury (CAS# 7439-97-6) is listed on the TSCA inventory.	
State Regulations: Mercury is on the following states Right to Know lists: California, New Jersey, Pennsylvania, Minnesota, and Massachusetts.	
U.S. State Regulations California Proposition 65:	
This product contains mercury, a chemical known to the State of California to cause birth defects or other reproductive harm.	
Canada – DSL/NDL: Mercury is listed on Canada's DSL List.	
Canada – WHMIS: Mercury has a WHMIS classification of D2A, E. This chemical has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this MSDS contains all of the information required by those regulations.	
Canada Ingredient Disclosure List: Mercury is listed on the Canadian Ingredient Disclosure List.	
Canadian Environmental Protection Act: This product is a medical device and not subject to chemical notification requirements.	
European Community Labeling: EC# 231-106-7 for Mercury. Mercury is Toxic and Dangerous for the Environment. R23 Toxic by Inhalation, R33 Danger of Cumulative Effects. R50/R53 Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment. S1/2 Keep locked up and out of reach of children, S7 Keep container tightly closed, S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible), S60 This material and its container must be disposed of as hazardous waste. S61 Avoid release to the environment. Refer to special instructions on the MSDS.	
European Inventory of New and Existing Chemicals Substances (EINECS): EC# 231-106-7 for Mercury.	
Other: Not Applicable	

16.Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex.
 All components are synthetically produced; none are derived from animal products.
 This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific products features and shall not establish a legally valid contractual relationship.
 The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.