

**Safety Data Sheet****Silmet Amalgam Alloys (Classification according to Directive 790/2009/EC)**

Replaces version of : 15.09.12

Rev. 5

rev date: 6/15

**SECTION 1: Identification of Product and Company****Manufacturer:** Silmet Ltd**Address:** 12 Hassadna St. Industrial Park. Or Yehuda 60200. Israel**Telephone:** + 972 3 7353000**Product Name:** Silmet Dental Amalgam – Alloy powder and mercury**Product Use:**

Indications: Intended for the use as a dental restorative material in the treatment of dental caries.

Limitations on Use: For use only by dental professionals

**SECTION 2: Composition/Information on Ingredients****Hazardous Ingredients**

	CAS #	PEL	TLV	%
Mercury	7439-97-6	0.05 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	47*

\* ( % Based on final Amalgam composition by weight)



WARNING  
Device Contains  
Mercury:  
Toxic by inhalation  
Danger of  
cumulative effects  
Corrosive to metals

Waste material and all primary  
containers that hold mercury  
shall be disposed of as hazardous  
waste. Refer to safety data  
sheets.  
Dispose of used capsules in  
accordance  
with national regulations.

**Other Ingredients**

Alloy powder contains silver, tin, copper and/ or zinc metals.

Silver 40-72% Copper 5-25% Tin 25-32% Zinc 0-1% Palladium 0 - 0.5%

Powder to Mercury ratio : app. one to one

**SECTION 3: Health Hazard Data****Routes of Entry:****Skin: Irritant/Sensitizer/Neurotoxin/Nephrotoxin**

**Acute Exposure:** May cause redness and irritation. **Chronic Exposure:** Possible sensitization, dermatitis and swelling. Mercury may be absorbed through intact skin causing urinary problems

**Eyes: Irritant.**

**Acute Exposure:** Contact may cause irritation. Mercury is corrosive and may cause corneal injury or burns. **Chronic Exposure:** Mercury may be deposited in the lens of the eye, causing visual disturbances.

**Inhalation: Irritant/Sensitizer/Neurotoxin**

**Acute Exposure:** Inhalation of mercury vapor can cause cough, fever, nausea, and vomiting. **Chronic Exposure:** Inhalation of high concentrations mercury

## Safety Data Sheet

**Silmet Amalgam Alloys (Classification according to Directive 790/2009/EC)**

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vapor over a long period causes mercurialism. Findings are extremely variable & include tremors, salivation, stomatitis, loosening of teeth, blue lines on gums, pain & numbness in extremities.

### **Ingestion: Neurotoxic/nephrotoxic**

**Acute Exposure:** May cause nausea, vomiting, kidney damage and nerve effects. **Chronic**

**Exposure:** Symptoms include Central Nervous System (CNS) disorders.

**Carcinogenicity - NTP:** No

**IARC Monographs: No OSHA Regulated Carcinogen:** No

## SECTION 4: First Aid Measures

**Skin:** Wash thoroughly with soap and water. Use hand cream. If irritation persists, consult a physician.

**Eye:** Flush with water for at least 15 minutes. Consult a physician.

**Inhalation:** Move to fresh air. If irritation persists, consult a physician.

**Ingestion:** Contact a physician. May cause neurotoxic/nephrotoxic effects.

## SECTION 5: Fire Fighting Measures

**Flash Point (Method Used):** N/A

**Flammable Limits: LEL:** N/A **UEL:** N/A

**Extinguishing Media:** Carbon dioxide, dry chemical foam

**Special Fire Fighting Procedures:** Firefighters should wear self-contained breathing apparatus when fighting a fire in an area containing mercury.

**Unusual Fire Fighting Procedures:** Emits toxic fumes in fire conditions.

## SECTION 6: Accidental Release Measures

Personal precautions: Avoid contact with skin.

Disposal: Dispose of according to local or state regulations.

Others: In case the material is released or spilled, clean up with inert absorbent material and dispose of in an approved manner. Do not allow to flow off into the drains or waters.

## SECTION 7: Handling and Storage

**Steps to be taken in case material is released or spilled:** Isolate the area and begin clean-up immediately. Do not touch spilled material. Cover all liquid droplets with a commercially available mercury vapour suppressant such as HG-X or elemental Sulfur. Collect the droplets using specialized mercury vacuum cleaners.

**Waste Disposal Method:** Material should not be allowed to enter sewers. All scrap mercury liquid and set alloy must be sent for reclamation by a commercial metal recycling facility.

**Precautions to be taken in handling and storing:** Store in a cool, dry place away from ignition sources.

**Other precautions:** Use according to directions. Wash hands thoroughly before smoking or eating.

## SECTION 8: Exposure controls/Personal Protection

## Safety Data Sheet

Silmet Amalgam Alloys (Classification according to Directive 790/2009/EC)

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**Respiratory Protection (Specify Type):** Not needed for small quantities as encountered in this product. **AVOID BREATHING OF VAPORS. HIGHLY TOXIC - IRRITANT - SENSITIZER.**

### VENTILATION:

**Local Exhaust:** Use in a well ventilated area to keep exposure under 0.05mg/m<sup>3</sup>.

**Mechanical (General):** Should be sufficient

**Protective Gloves:** Chemical resistant or latex gloves required

**Eye Protection:** Safety glasses with side shields. Full face shields

**Work/Hygiene Practices: USE ONLY ACCORDING TO DIRECTIONS.**

**Wash thoroughly after handling.** Handle in accordance with good personal hygiene and safety practices. These practices include avoiding unnecessary exposure.

## SECTION 9: Physical and Chemical Properties

**Boiling Point:** 674 °F

**Specific Gravity (H<sub>2</sub>O = 1):** 13.35

**Vapor Pressure (mm Hg):** 0.0012 mm Hg @ 68 °F

**Melting Point:** -38 °F

**Vapor Density:** N/E

**Evaporation Rate:** N/E

**Solubility in Water:** 0.0002g/100g water @ 68 °F

**Appearance and Odor: Powder:** Odorless dark-gray alloy of silver, tin, copper and/or zinc.

**Liquid:** Mercury is a silvery, mobile, odorless liquid.

**This MSDS addresses the mercury (liquid) portion of the product, which is a known health hazard. The powder is not considered to be hazardous. The health hazard data section references information relative to bulk quantities of elemental mercury and may not reflect the actual hazards of small quantities such as those encountered with this product.**

## SECTION 10: Stability and Reactivity

**Stability:** Stable

**Conditions to Avoid:** High temperatures.

**Incompatibility (Material to Avoid):** Halogens, ammonia, and strong oxidizing agents.

**Hazardous Decomposition Byproducts:** Mercury Vapor.

**Hazardous Polymerization:** Will not occur

## SECTION 11: Toxicological Information

**Acute toxicity:** Toxic by inhalation

Do not open or damage the capsule before mixing.

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

**Subacute / Chronic toxicity:** In very rare cases amalgam allergies may occur. Inhalation is hazardous to the central nervous system

**Further information:** Avoid exposure of mercury to pregnant person.

## SECTION 12: Ecological Information

## Safety Data Sheet

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Ecotoxicity: The product must not enter effluent, ground water, surface water or the soil.

Mobility : No data available

Persistence and degradability: : No data available

Bioaccumulative potential: No data available

### SECTION 13: Disposable considerations

Any disposal practice must be in compliance with local and national regulations.

Material in the elemental state and also left-overs from restorations should be saved in a plastic container for reuse or recycling. For disposal contact an expert for chemical waste, at your local-, federal or state waste department.

### SECTION 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**

**Limits: LQ -5kg**

**ADR/RID Class: UN 2809**

**Shipping name: Mercury**

**Class: 8**

**Packing Group: III**

**LQ - 5 kg**

### SECTION 15: Regulatory Information

This product is classified as a medical device under EC Directives, US and Canadian regulations

#### HMIS (Hazardous Material Identification System) Rating:

H3 F0 R0

**[HMIS Index: 4 - Severe Hazard; 3 - Serious Hazard; 2 - Moderate Hazard; 1 - Slight Hazard; 0 - Minimum Hazard]**

#### State RTK: California Proposition 65 WARNING:

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

### SECTION 16: Other Information

Date of revision: 28.1.14

**CAUTION: PRODUCT FOR PROFESSIONAL USE**



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The information on this safety sheet is based on presently available data and to our best knowledge for the correct handling of the product under normal conditions. Any use of this product in any way not indicated on this sheet or use of this product together with any other process/procedure will be exclusively under the user's responsibility.