

Material Safety Data Sheets (MSDS's) for Dental Amalgam

Even the manufacturers state that their products are dangerous

Material Safety Data Sheets are information sheets about a particular product (or part thereof), compiled by the manufacturer, about the safety or otherwise of the particular product, aside from information of a more general kind. MSDS's are publicly available. You can easily find them on an internet search.

It beggars belief that any dental association or university would have the audacity to claim that amalgam is safe and effective, while the manufacturers have told us so long ago that it is dangerous. Surely it is time for the deans and professors to start telling the truth.

The American Dental Association still owns two patents on one of the worlds most popular amalgam. Is there a vested interest?

AmDA has owned 2 patents on amalgams since 1977-78

1. United States Patent 4,018,600 Apr. 19, 1977.
2. United States Patent 4,078,921 Mar. 14, 1978.

Dispersalloy® Caulk Co.

Dispersalloy® has an MSDS for each of its two components. Dispersalloy® Dispersed Phase Alloy and Mercury - Dated Revised 9/24/97

This MSDS was posted at this address in 1997 - <http://www.caulk.com/MSDSDFU/DispersDFU.html> - within about 6 months this site was removed. The information contained in the MSDS is compelling.

To get a more complete understanding of the dangers of mercury which is released from amalgam fillings, it is hard to go past what the manufacturers say.

Contraindication means that their material 'should not be used in the following circumstances'.

Side Effects/Warning

Prior to use, read the MSDS information and product instructions for this item.

Exposure to mercury may cause irritation to skin, eyes, respiratory tract and mucous membrane. In individual cases, hypersensitivity reactions, allergies, or electrochemically caused local reactions have been observed. Due to electrochemical processes, the lichen planus of the mucosa may develop. Mercury may also be a skin sensitizer, pulmonary sensitizer, nephrotoxin and neurotoxin.

The use of amalgam is contraindicated;

- 1. In proximal or occlusal contact to dissimilar metal restorations.***

2. *In patients with severe renal deficiency.*
3. *In patients with known allergies to amalgam.*
4. *For retrograde or endodontic filling.*
5. *As a filling material for cast crown.*
6. *In children 6 and under.*
7. *In expectant mothers.*

Mercury expressed during condensation and unset amalgam may cause amalgamation or galvanic effect if in contact with other metal restorations. If symptoms persist, the amalgam should be replaced by a different material.

Removal of clinically acceptable amalgam restorations should be avoided to minimize mercury exposure, especially in expectant mothers.

Precautions

The number of amalgam restorations for one patient should be kept to a minimum. Inhalation of mercury vapor by dental staff may be avoided by proper handling of the amalgam, the use of masks, along with adequate ventilation. Avoid contact with skin and wear safety glasses and gloves. Store amalgam scrap in well sealed containers. Regulations for disposal must be observed.

<http://www.caulk.com./MSDSDFU/DispersalloyMSDS.html>

MATERIAL SAFETY DATA SHEET

1.1 Product Trade Name: Mercury

1.2 Part (Item) Number: 904061

Health affects and first aid

Inhalation: Acute:

Inhalation of a high concentration of mercury vapor can cause almost immediate dyspnea, cough, fever, nausea and vomiting, diarrhea, stomatitis, salivation, metallic taste, gingivitis, and cardiac abnormalities. Respiratory irritation may occur with chest pain and tightness. Symptoms may resolve or may progress to necrotizing bronchiolitis, pneumonitis, pulmonary edema, pneumothorax, interstitial fibrosis, and death. Acidosis and renal damage may also occur. Allergic reactions that may occur in previously exposed persons include dermatitis, encephalitis, and death. Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

Inhalation: Chronic:

Inhalation of mercury vapor over a long period may cause mercurialism which is characterized by fine tremors and erethism. Tremors may affect the hands first, but may also become evident in the face, arms, and legs. Erethism may be manifested by abnormal shyness, blushing, self-consciousness, depression or despondency, resentment of criticism, irritability or excitability, headache, fatigue, and insomnia. In severe cases, hallucinations, loss of memory, and mental deterioration may occur. Concentrations as low as 0.03 mg/m³ have induced psychiatric symptoms in humans. Renal involvement may be indicated by proteinuria,

albuminuria, enzymuria, and anuria. Other effects may include salivation, gingivitis, stomatitis, loosening of the teeth, blue lines on the gums, diarrhea, chronic pneumonitis and mild anemia. Repeated exposure to mercury and its compounds may result in sensitization. Intrauterine exposure may result in tremors and involuntary movements in the infants. Mercury is excreted in breast milk. Paternal reproductive effects and effects on fertility have been reported in male rats following repeated inhalation exposures.

Skin contact: Acute :

Direct contact with liquid may cause irritation and redness. Small amounts of mercury may be absorbed through intact skin. Allergic reactions that may occur in previously exposed persons include dermatitis, encephalitis, and death. Subcutaneous introduction, from handling broken thermometers, may result in local inflammation, granulomatous skin reactions, and slight signs of mercury poisoning including digestive disorders, metallic taste in the mouth, and neuropsychic disorders.

Skin contact: Chronic:

prolonged or repeated exposure may result in dermal sensitization and systemic effects as detailed in chronic inhalation exposure. Skin contact: Get medical attention immediately.

Eye contact:

Acute: Direct contact with liquid may cause irritation and redness. Animal studies indicate **diffusion and absorption** of mercury into the tissues of the eye may occur. No clinical signs of conjunctivitis or inflammation occurred.

Eye contact:

Chronic: Mercury exposure from inhalation, ingestion, or skin contact may be indicated by **mercurialentis, discoloration** of the crystalline lens, on slit lamp examination of the eye.

Ingestion:

May cause burning of the mouth and throat, thirst, nausea and vomiting. Metallic mercury is not usually absorbed sufficiently from the gastrointestinal tract to induce an acute toxic response. Rarely, a large single dose may result in sign and symptoms of chronic inhalation is sufficient amount of mercury are retained in the body.

Chronic: Repeated ingestion of small amount of mercury may result in the absorption of sufficient amounts to produce toxic effects as detailed in chronic inhalation exposure

Lojic Manufacturer SDI Australia

HANDLING AND STORAGE

Handling: Do not breathe powder and avoid exposed mercury surfaces. Wear appropriate gloves, goggles, 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.

TOXICOLOGICAL INFORMATION

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. See Sections 3 and 4 for effects of acute exposure.

Contains mercury.

Toxic by inhalation.

Keep container tightly closed.

If you feel unwell, seek medical advice immediately.

F400

Manufacturer SDI Australia

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Permite

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Vivacap

Ivoclar Vivadent

Amalcap Plus Non-Gamma-2

12/01/1997

(Spelling is original and from the MSDS exact)

Toxicological information

"Acute toxicity Alloy powder and mercury are predosed in closed capsules, therefore the

danger of exposition to mercury vapours are low.
Do not open or damage the capsule before mixing.
Toxic by inhalation.

Subacute chronic toxicity Inhalation is hazardous to the central nervous system. In very rare cases amalgam allergies may occur.

Further information Avoid exposure of mercury to pregnant person.

Ecological information German Wassergefährdungs Klasse (WGK): The product must not enter effluent, ground water, surface water or the soil.

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

Tytin FC

Tytin Precapsulated

Sybraloy precapsulated

Contour

Manufacturer Kerr Corporation Germany

All carry the following warnings

HEALTH HAZARD DATA

Route 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 blurs. 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 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.

TYTIN

"WARNING

This dental amalgam product contains mercury. The placement of a dental amalgam in a patient will increase the levels of mercury in the body of the patient. The use of a rubber dam may decrease the amount of mercury absorbed by a patient during the removal or placement of an amalgam.

The health authorities of the various countries including Canada, Germany, France, the United Kingdom, Norway and Austria have recommended against the placement or removal of amalgam in certain individuals such as pregnant and nursing women and persons with impaired kidney function."

California Prop 65 warning:

This product contains mercury a product known to the state of California to cause birth defects and other reproductive harm.

PHASEALLOY

Wykle Research inc
22nd Feb 1996

California Prop 65 warning:

This product contains mercury a product known to the state of California to cause birth defects and other reproductive harm.

Chronic Health Effects

Inhalation of mercury vapors, absorptioin through intact skin, dusts, over a long period cause mercurialism. Findings extremely variable and include tremors, salivation, stomatitis, loosening of the teeth, blue lines on the gums, pain and numbness in extremities, nephritis, diarrhea, anxiety, headache, weight loss, anorexia, mental depression, insomnia, irritability, and instability, hallucinations and evidence of mental deterioration,. (Mercury) may cause argyria (greyish-blue pigmentation of the skin).