



**TALLADIUM, INC.**  
**SAFETY DATA SHEET**  
**27360 W. Muirfield Lane, Valencia • California 91355**  
**(661) 295-0900 • (800) 221-6449**

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**Section 1 - Product and Company Identification**

**Issue Date:** 09/06/1985

**Review Date:** 02/18/2015

**Product Identification:** Vi-Tal Partial Alloy

**Product Synonym:** Chromium Cobalt Alloy

**Product Class/Use:** Dental Alloy

**Company Name:** Talladium, Incorporated

**Company Address:** 27360 West Muirfield Lane  
Valencia, California 91355  
United States of America

**General Information Telephone:** (661)-295-0900

**Emergency Telephone:** Not required by regulations.

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**Section 2 - Composition/Information on Ingredients**

SUBSTANCE	C.A.S	% Range By Weight	OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
Cobalt	7440-48-4	60 – 65 %	0.05	0.15
Chromium	7440-47-3	17 – 32 %	0.1	0.2
Molybdenum	7439-98-7	4.0 – 8.0 %	0.05	0.05
Aluminum	7429-90-5	4.0 – 6.0 %	0.05	0.05
Titanium	7440-32-6	4.0 – 6.0 %	0.05	0.05

In compliance with ADA Guidelines for Partial Dental Alloys

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**Section 3 - Hazards Identification, Including Emergency Overview**

This alloy contains Chromium, Molybdenum. All of the alloyed contents are in a compounded state with no raw metals available. Dental Laboratory Technicians work with a variety of potentially toxic substances, including various dusts from silica, silicon carbide, ceramics (porcelain) and metallic alloys. It is recommended to follow good industrial hygiene practice, which includes reducing airborne exposures to the lowest feasible level for all constituents of all dental laboratory substances. NTP anticipates or confirms that Chromium to be human carcinogens. IARC classifies Chromium as possibly carcinogenic to humans.

**Inhalation:** May cause irritation to the nose, throat, lungs and mucous membranes. Chromium dust may cause headache, dizziness, coughing and difficulty of breathing.

**Eyes:** Particulate metal dust may be dangerous to the eye and surrounding tissue.

**Skin:** May cause in some sensitive individuals an allergic response.

**Ingestion:** Ingestion of Chromium dust or powder may cause gastrointestinal irritation or liver damage.

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**Section 4 - First Aid Measures**

**Inhalation:** Remove to fresh air. If breathing is becomes difficult seek immediate medical attention.

**Eyes:** If contact occurs, flush eyes immediately with water for 15 minutes. If irritation develops, seek medical attention.

**Skin:** If contact occurs, wash skin immediately with water. If product is hot, immediately immerse or flush the affected area with large amounts of cold water to dissipate heat. Cover the affected area with gauze and seek medical attention.

**Ingestion:** Swallow large quantities of water. Do not induce vomiting. Never give anything by mouth to unconscious person. Seek medical attention.



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### Section 5 - Fire Fighting Measures

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<b>Extinguishing Media:</b> Not combustible	<b>Auto-ignition Temperature:</b> Not determined
<b>OSHA Flammability Classification:</b> None	<b>Explosive Lower Limit(s):</b> Not determined
<b>Flash Point/ Method:</b> Not determined	<b>Explosive Upper Limit(s):</b> Not determined

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### Section 6 - Accidental Release Measures

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#### Spill Release Procedures:

Allow molten material to solidify and scrape up. Collect material and place in disposal container. Dispose in accordance with local, state, provincial and federal laws and regulations. Avoid contamination of ground water and soil.

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### Section 7 - Handling and Storage

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**Handling:** Do not inhale fumes from heated material or dust when grinding. Use with adequate ventilation. Wear protective eye and clothing during usage. Minimize dust generation and accumulation.

**Storage Precautions:** Store in closed container in a dry place away from incompatible materials.

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### Section 8 - Exposure Controls & Personal Protection

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#### Occupational Exposure Limits:

Cobalt	0.02 mg/m <sup>3</sup> TWA ACGIH TLV, 0.1 mg/m <sup>3</sup> TWA OSHA PEL, 0.1 mg/m <sup>3</sup> TWA UK WEL
Chromium	0.5 mg/m <sup>3</sup> TWA OSHA PEL, 0.5 mg/m <sup>3</sup> TWA ACGIH TLV, 0.5 mg/m <sup>3</sup> TWA UK WEL, 2 mg/m <sup>3</sup> TWA EU IOEL
Molybdenum	10 mg/m <sup>3</sup> TWA ACGIH TLV (Inhalable), 3 mg/m <sup>3</sup> TWA ACGIH TLV (Respirable Fraction), 15 mg/m <sup>3</sup> TWA OSHA PEL (Total Dust), 10 mg/m <sup>3</sup> TWA UK WEL, 20 mg/m <sup>3</sup> STEL UK WEL

**Ventilation:** Use adequate local ventilation to control airborne exposure to keep below occupational exposure limits.

**Respiratory Protection:** In case of exposure to fumes from hot processing or dust from grinding, use appropriate NIOSH-approved respiratory protective equipment.

**Eye Protection:** Wear safety glasses with side shields.

**Skin Protection:** Gloves may be desirable for specific work situations. Wear a flame retardant apron when melting.

**Other Protective Equipment:** A safety shower and eye wash fountain should be readily available. It is recommended that a hazard assessment in accordance with the OSHA Personal Protective Equipment (PPE) Standard in 29 C.F.R. §1910.132 be conducted before using this product in order to identify additional PPE requirements.

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### Section 9 - Physical & Chemical Properties

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<b>Boiling Point:</b> Not available	<b>Specific Gravity:</b> 8.2
<b>Melting Point:</b> 2250 - 2450° F (1232 - 1343° F)	<b>Evaporation Rate:</b> N/A
<b>pH:</b> N/A	<b>Solubility in Water:</b> N/A
<b>Vapor Pressure:</b> N/A	<b>Appearance:</b> Solid
<b>Vapor Density:</b> Heavier than air ( i.e., >1 )	<b>Odor:</b> Odorless

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## Section 10 - Stability & Reactivity Data

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**Stability:** Stable under normal storage conditions.

**Hazardous Polymerization:** Will not occur under normal conditions.

**Conditions to Avoid:** None in applicable use.

**Incompatibility with Other Materials:** No known incompatibility with other materials

**Hazardous Decomposition Products:** No known hazardous decomposition products.

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## Section 11 - Toxicological Information

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**Toxicological Information:** None available

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## Section 12 - Ecological Information

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**Ecological Information:** Considered chemically inert in the environment.

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## Section 13 - Disposal Considerations

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**Waste Disposal Methods:** Follow all federal, state, and local regulations.

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## Section 14 - Transport Information

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**U.S. DOT Information:** Not regulated.

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## Section 15 - Regulatory Information

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**Federal Regulatory Information:**

**OSHA:** This product does contain hazardous material as defined in Section 3. Standard 29 CFR 1910.132.

**EPA:** This product is not defined as hazardous waste per 40 CFR 261.

**Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III**

**Section 313:** This product contains components subject to reporting requirements.

**State Regulatory Information:**

**Canada:** This product is listed on the DSL.

**California:** Proposition 65: This product contains substances known to the State of California to cause cancer.

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## Section 16 - Other Information

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The information and recommendations above are believed to be accurate and represent the best information currently available to us. The person receiving the above material should make their own determination as to the suitability for their use. Talladium makes no warranty expressed or implied with respect to this information and assumes no liability resulting from its use.