



## B.T.M. (Beta Titanium Molybdenum) Wires

### 1 – IDENTIFICATION

**PRODUCT NAME:** B.T.M. (Beta Titanium Molybdenum) Wires

**CHEMICAL NAME:**

**CHEMICAL FAMILY:**

**FORMULA:**

**COMPANY NAME:**

Orthodontic Design and Production

1370 Decision Street, Suite D

Vista, CA 92081 (760) 734-3995

### 2 – HAZARDOUS INGREDIENTS

MATERIAL	CAS #	%(RANGE)	ACGIH-TLV	OSHA-PEL
Titanium (Ti)	7440-32-6	70-80%	10	5*
Zirconium (Zr)	7440-67-7	5-10%	5	5
Tin (Sn)	7440-31-5	4-8%	2	2
Molybdenum (Mo)	7439-98-7	10-20%	10**	5*

\*\* Exposure limit for metal or oxide of the metal

\* Respirable fraction of dust

### 3 – HEALTH HAZARD DATA

**INHALATION:** Use local ventilation and/or respiratory protective equipment to limit exposure to airborne dusts. **If sudden exposure does occur:** remove victim to fresh air, begin artificial respiration, if victim is not breathing

**SKIN CONTACT:** Exposure or repeated contact may irritate the skin. Avoid frequent and prolonged contact. Wear suitable protective clothing and gloves. In case of contact: brush off skin and clothing. Wash with soap and water. Remove metallic particles and cleanse wound.

**INGESTION:** seek prompt medical help

**EYE CONTACT:** flush eyes with water.

Articles made from titanium and titanium alloys are not ignitable, corrosive, or reactive. Dust and powders are a moderate fire and explosive hazard when exposed to heat, flame, electric current, or static electricity. For purposes of this MSDS, occupational exposure to alloys is taken to mean dusts, fumes, or solutions containing metals that can become airborne or can spill on skin or in the eye. Occupational exposure to alloys does not include solid products (i.e. ingots or castings), provided no particle generating operations, exposure would include inhalation, skin & eye contact. Titanium is considered relatively non-toxic.

## MATERIAL SAFETY DATA SHEET

### 4 – PHYSICAL AND CHEMICAL PROPERTIES

**BOILING POINT:** n/a

**MELTING POINT:** n/a

**VAPOR DENSITY (Air=1.00):** n/a

**SPECIFIC GRAVITY (H2O=1.00)** n/a

**SOLUBILITY IN WATER:** not soluble

**PHYSICAL FORM:** Solid, dark grey ingots or castings

**COLOR:** Dark grey

**ODOR:** odorless

### 5 – FIRE AND EXPLOSION HAZARD DATA

**FLASH POINT:** n/a

**FLAMMABLE LIMITS:** n/a

**LEL:** n/a

**UEL:** n/a

**EXTINGUISHING MEDIA:** Do not use CO2 Extinguishers. San, dolomite, graphite or sodium chlorides work best.

**SPECIAL FIREFIGHTING PROCEDURES:** Solid metal, not ignitable

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Titanium fines can ignite if airborne. They are a moderate fire and explosive hazard when exposed to heat, flame, electric current or static electricity.

### 6 – REACTIVITY DATA

**GENERAL:** Titanium and titanium alloys are not reactive

**STABILITY:** stable

**CONDITIONS TO AVOID:** high temperature, prolonged storage above 35 degrees Celsius, direct sunlight, high intensity light, open flames, contaminations

**INCOMPATIBILITY:** n/a

**HAZARDOUS DECOMPOSITIONS:** n/a

**HAZARDOUS POLYMERIZATION:** will not occur

### 7 – EMERGENCY/FIRST AID MEASURES

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**INGESTION:** seek prompt medical help

**EYE CONTACT:** flush eyes with water.

**Note:** This MSDS was prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) and is to be used only for this product. The information contained in this MSDS is, to the best of our knowledge, believed to be accurate.  
**CONTACT CHEMTREC (800) 424-3900 IN CASE OF EMERGENCY**



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### 8 – HANDLING AND STORAGE

**GENERAL:** Use good housecleaning practices to prevent accumulation of dust, and follow cleaning techniques (vacuuming and wet sweeping) that will keep dusting to a minimum. Do not eat, drink, or smoke in areas where metal dusts or fumes are generated.

### 9 – SPECIAL PROTECTION

**SOLID FORM:** Special protective clothing is not normally needed.

**FUMES AND DUST:** Provide local exhaust ventilation in areas where metal fumes or dusts are.

### 10 – SPILL OR LEAK PROCEDURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

**SOLID FORM:** Return to the original container and recycle.

**DUST:** Cleanup personnel should wear protective clothing and equipment: gloves, goggles, aprons, respirators, etc. Keep airborne dust to a minimum. Avoid dry sweeping of fine dust. Sweep or vacuum up spilled materials. Wet down area if necessary, but do not flush into drains or waterways. Place in a metal or plastic drum, seal and save for reclamation.

### 11 – DISPOSAL INFORMATION

**WASTE DISPOSAL METHOD:** Handle like any dust or dirt

### 12 – REGULATORY INFORMATION

These products are manufactured using Good Manufacturing Practices and are regulated as Class I Medical Devices by the U.S. Food and Drug Administration. Class II by the Canada CMDR.

### 13 – DISCLAIMER OF WARRANTIES

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for his or her particular purpose(s).

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