JM ORTHO

MATERIAL SAFETY DATA SHEET

1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

1.1 Chemical Nature: Titanium Niobium Alloy

Trade Name: GUMMETAL Wire

Use: Orthodontic Wires

1.2 Company Identification:
JM Ortho Corporation
Ochanomizu-kyoun Buld.14F.
2-2 Kanda-Surugadai, Chiyoda-Ku Tokyo 101-0062 Japan
Telephone: 81-3-5281-4711
Facsimile: 81-3-5281-4716

1.3 Emergency Contact: 81-3-5281-4711

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	Composition	Symbol	CAS#	Threshold limit value in mg/m^3
Titanium	55-65%	Ti	7440-32-6	10 mg/m^3 as TiO_2
Niobium	30-40%	Nb	7440-03-1	None Listed
Tantalum	1-5%	Ta	7440-25-7	5 mg/m^3
Zirconium	1-5%	Zr	7440-67-7	5 mg/m^3

3. HAZARDS IDENTIFICATION

3.1 Articles made from Titanium Niobium Alloy 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, such as grinding or cutting, occur. In most industrial situations, the significant routes of exposure would include inhalation, skin and eye contact.

Titanium metal is considered relatively nontoxic.

4. FIRST-AID MEASURES

4.1 Inhalation: Use local ventilation and/or respiratory protective equipment to limit exposure to airborne dusts. If sudden overexposure does occur: remove to fresh air immediately, get medical advice if condition continues.

4.2 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 wounds.

4.3 Ingestion: Seek prompt medical help.

4.4 Eyes: Flush eyes with water.

5. FIRE-FIGHTING MEASURES

5.1 Solid Metal: Not ignitable.

5.2 Melting Point: 1675°C (For Titanium)

5.3 Odor: Odorless

5.4 Appearance: Metallic Silver

5.5 Dust and Powder: Titanium fines can ignite if airborne. They are a moderate fire and explosive hazard when exposed to heat, flame, electric current or static electricity.

5.6 Extinguishing Media: *DO NOT USE WATER OR CO2 EXTINGUISHERS!* Sand, dolomite, graphite power or sodium chloride work best.

6. ACCIDENTAL RELEASE MEASURES

6.1 Solid Form: Return to the original container and recycle.

6.2 Dust: Cleanup personnel should wear protective clothing and equipment: gloves, goggles, aprons, respirators, etc. Keep airborne dust to a minimum. Avoid dry sweeping of fines. Sweep or vacuum up spilled materials.

7. HANDLING AND STORAGE

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Solid Form: Special protective clothing is not normally needed.

8.2 Fumes and Dusts: Provide local exhaust ventilation in areas where metal fumes or dusts are.

9. PHYSICAL AND CHEMICAL PROPERTIES

The alloy is sold as dark gray ingots or castings or as drawn fine wires. The material is not soluble in water and has no odor.

10. STABILITY AND REACTIVITY

Titanium Niobium Alloy are not reactive.

11. TOXICOLOGICAL INFORMATION

Product tested for bio-compatibility with results concluding negative toxicological reaction. Tests results on file.

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

13.1 Solid Forms: Articles made of titanium are not hazardous. No special disposal regulations apply.

13.2 Dusts and Fines: If airborne, titanium fines can burn. When ignited, titanium is very difficult to extinguish. Before being disposed of titanium fines should be stabilized (solidified or diluted with sand or other noncombustible substances) to prevent being ignited.

14. TRANSPORT INFORMATION

None of the materials in this product are regulated as hazardous by the Department of Transportation.

15. REGULATORY INFORMATION

Titanium Niobium Alloy are not subject to chemical notification requirements.

16. OTHER INFORMATION

16.1 The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. Therefore, it should not be construed as guaranteeing specific properties.

16.2 Revision Date: August 8, 2018