



1714 Cambridge Avenue • P.O. Box 1048 • Sheboygan, WI USA 53082-1048  
920-457-5051 • USA and Canada: 1-800-558-7687 • Fax: 920-457-1485  
Email: amo@americanortho.com • www.americanortho.com

## ***CERTIFICATE OF CONFORMANCE***

August 2, 2006

RE: Latex in American Orthodontics' Products

### ***AO Products Containing Latex***

Natural Color Latex Elastics

Neon Color Latex Elastics

American Orthodontics' elastics are manufactured from surgical grade, natural latex tubing.

### ***AO Latex Free Products***

**American Orthodontics certifies the following Urethane Products to be free of natural latex.**

#### **American Orthodontics' Urethane products (All are latex-free):**

All Plastic Ligatures, including:

Unistick Ligatures

Six Stick Ligatures

10 Ring Ligatures

Cane Ligatures

Bulk Ligatures

Plastic Chain

Memory Chain

X-Ring Separators

Radio Opaque Separators

E-Z Tie & Plastic Tie Tubing

Arch Wire Sleeves

Rotation Wedges

Jasper Jumpers, Gentle Jumpers, Rapid Molar Intruders

Korn Mandibular Advancer and MAP components

Andrew Pietzner

Consumer Safety Information Coordinator

Tel (800) 558-7687 x137

Fax (920) 457-1485

E-mail: arp@americanortho.com



**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name	Emergency telephone number
<b>American Orthodontics</b>	<b>(920) 457-5051</b>
<b>1714 Cambridge Ave</b>	Telephone for information
<b>Sheboygan Wisconsin 53081</b>	<b>(920) 457-5051</b>

## Product Identification:

Product Name	Beta Titanium Wires
Common Name	Beta Titanium Alloy
Associated Catalog Numbers	Various

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Titanium (Ti)	7440-32-6	N/E	N/E
	Molybdenum (Mo)	7439-98-7	15.0	10.0
	Zirconium (Zr)	7440-67-7	5.0	5.0
	Tin (Sn)	7440-31-5	2.0	2.0

N/E = None Established

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	>2000°C
Specific Gravity	5.06
Solubility in Water	Insoluble
Vapor Pressure	0 at 100°C
Appearance	Silver-gray metal
Odor	Odorless

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	N/A

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	None
Hazardous Decomposition Products	None
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	None known
Chronic Hazards	None known
Signs & Symptoms Of Overexposure	None known

Routes of Entry:	Symptom:	Emergency / First Aid Procedures:
Eye Contact	N/A	N/A
Skin Contact	N/A	N/A
Inhalation	N/A	N/A
Ingestion	N/A	N/A

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Mechanical exhaust
Respiratory Protection	N/A
Protective Gloves	N/A
Eye Protection	N/A
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Clean up
Waste Disposal Method	Dispose of in accordance with local, state and federal regulations
Handling & Storage Precautions	None

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

# MATERIAL SAFETY DATA SHEET

## SECTION I – PRODUCT AND COMPANY IDENTIFICATION

Company Name  
**American Orthodontics**  
**1714 Cambridge Ave**  
**Sheboygan Wisconsin 53081**

Emergency telephone number  
**(920) 457-5051**  
Telephone for information  
**(920) 457-5051**

### Product Identification:

Product Name Etching Gel, Semi-Gel, or Liquid  
Common Name Etching Agent  
Associated Catalog Numbers 001-903, 001-912, 001-913, 001-900, 001-910

## SECTION II – HAZARDOUS COMPONENTS

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Phosphoric Acid	7664-38-2	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>

## SECTION III – PHYSICAL CHARACTERISTICS

Boiling Point 158°C  
Specific Gravity 1.69  
Solubility in Water Soluble  
Vapor Pressure ca 750mm HG at 100°C  
Appearance Gel, Semi-Gel, or Liquid  
Odor Characteristic

## SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Extinguishing Media N/A  
Unusual Fire & Explosion Hazards N/A  
Special Fire Fighting Procedures N/A

## SECTION V – REACTIVITY DATA

Reactivity Stable  
Incompatible Materials Alkaline materials, metals  
Hazardous Decomposition Products None  
Hazardous Polymerization Will Not Occur

## SECTION VI – HEALTH HAZARD DATA

Acute Hazards	Damage to tissue on contact	
Chronic Hazards	None known	
Signs & Symptoms Of Overexposure	Skin irritation	
Routes of Entry:	Symptom:	Emergency / First Aid Procedures:
Eye Contact	Irritation	Flush with copious amounts of water, contact physician
Skin Contact	Irritation	Wash with copious amounts of water
Inhalation	N/A	N/A
Ingestion	Irritation	Drink milk or baking soda, contact physician

## SECTION VII – SPECIAL PROTECTION INFORMATION

Ventilation Mechanical exhaust  
Respiratory Protection N/A  
Protective Gloves Recommended  
Eye Protection Recommended  
Work / Hygienic Practices Avoid contact with skin or mucous membranes

# MATERIAL SAFETY DATA SHEET

## SECTION VIII – SAFE HANDLING MEASURES

Precautions In Case Of Spill	Wash with water into sewer
Waste Disposal Method	Wash with water into sewer
Handling & Storage Precautions	Routine precautions applicable to acids

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name <b>American Orthodontics</b> <b>1714 Cambridge Ave</b> <b>Sheboygan Wisconsin 53081</b>	Emergency telephone number <b>(920) 457-5051</b> Telephone for information <b>(920) 457-5051</b>
Product Identification: Product Name	FluorSure Visible Light Curable Fluoride Releasing Sealant
Common Name	Light Cure Orthodontic Adhesive Sealant with Fluoride
Associated Catalog Numbers	001-915

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Sodium Fluoride	7681-49-4	2.5 mg/m <sup>3</sup>	2.5 mg/m <sup>3</sup>

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	N/A
Specific Gravity	2.2
Solubility in Water	Virtually insoluble
Vapor Pressure	N/A
Appearance	Tooth colored paste
Odor	Negligible

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	N/A

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	None
Hazardous Decomposition Products	None
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	Possibility of irritation to eyes, mucous membranes	
Chronic Hazards	Possibility of sensitization or irritation upon prolonged or repeated exposure	
Signs & Symptoms Of Overexposure	Skin/eye irritation	
<u>Routes of Entry:</u>	<u>Symptom:</u>	<u>Emergency / First Aid Procedures:</u>
Eye Contact	Irritation	Flush with copious amounts of water, contact physician
Skin Contact	Irritation	Wash with copious amounts of water and soap
Inhalation	N/A	N/A
Ingestion	Irritation	Induce vomiting if large amount of material ingested , contact physician

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Mechanical exhaust
Respiratory Protection	N/A

Protective Gloves	Recommended
Eye Protection	Recommended
Work / Hygienic Practices	Avoid contact with skin or mucous membranes

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Wipe up with soap and water
Waste Disposal Method	Dispose of in accordance with local, state and federal regulations
Handling & Storage Precautions	Routine precautions applicable to acids

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name <b>American Orthodontics</b> <b>1714 Cambridge Ave</b> <b>Sheboygan Wisconsin 53081</b>	Emergency telephone number <b>(920) 457-5051</b> Telephone for information <b>(920) 457-5051</b>
---	---

## Product Identification:

Product Name	Bandtite Liquid
Common Name	Glass Ionomer Liquid
Associated Catalog Numbers	001-970, 001-970M, 001-971

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Polyacrylic acid	79-10-7	1 ppm	10 ppm

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	ca 105°C
Specific Gravity	ca 1.41
Solubility in Water	Soluble
Vapor Pressure	ca 720 mm HG at 100°C
Appearance	Liquid
Odor	Characteristic Odor

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	N/A

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	Alkaline Materials
Hazardous Decomposition Products	Carbon Monoxide (CO), Carbon Dioxide (CO <sub>2</sub> )
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	May cause irritation to eyes, mucous membranes
Chronic Hazards	None known
Signs & Symptoms Of Overexposure	Irritation to eyes, mucous membranes

Routes of Entry:	Symptom:	Emergency / First Aid Procedures:
Eye Contact	May cause irritation	Flush immediately with copious amounts of water, contact physician.
Skin Contact	May cause irritation	Wash immediately with copious amounts of water, contact physician.
Inhalation	N/A	N/A
Ingestion	No hazard in small quantities	If large amounts ingested, take baking soda, contact physician.

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Mechanical exhaust
-------------	--------------------

Respiratory Protection	N/A
Protective Gloves	May be used
Eye Protection	May be used
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Wash with water into sewer
Waste Disposal Method	Wash with water into sewer
Handling & Storage Precautions	Avoid exposure to elevated temperatures

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name <b>American Orthodontics</b> <b>1714 Cambridge Ave</b> <b>Sheboygan Wisconsin 53081</b>	Emergency telephone number <b>(920) 457-5051</b> Telephone for information <b>(920) 457-5051</b>
Product Identification: Product Name	IC Tip Freeze Spray
Common Name	Halogenated Hydrocarbon Freeze Spray
Associated Catalog Numbers	001-968

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	1,1,1,2-tetra-fluoroethane	811-97-2	N/E N/E = None Established	N/E

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	-26.5°C
Specific Gravity	N/A
Solubility in Water	Insoluble
Vapor Pressure	N/A
Appearance	Clear, colorless gas
Odor	Slight ethereal

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	Cans may rupture in fires. Decomposition may occur.
Special Fire Fighting Procedures	Cool cans with water spray

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	Alkali or Alkaline earth metals
Hazardous Decomposition Products	Hydrofluoric acid
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	Frostbite possible. Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness or death. Intentional misuse can be fatal.	
Chronic Hazards	None known	
Signs & Symptoms Of Overexposure	As above	

<u>Routes of Entry:</u>	<u>Symptom:</u>	<u>Emergency / First Aid Procedures:</u>
Eye Contact	Irritation, redness	Flush with water for 15 minutes, contact physician
Skin Contact	Irritation, redness	Flush with water after excessive contact. Wash contaminated clothing before reuse. Treat for frostbite by gently warming affected area.
Inhalation	Breathing difficulties, heart	Immediately remove to fresh air. If not

	irregularities	breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion	N/A	Seek medical attention as required

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Mechanical exhaust
Respiratory Protection	N/A
Protective Gloves	Recommended
Eye Protection	Recommended
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Clean up
Waste Disposal Method	Dispose of in accordance with local, state and federal regulations
Handling & Storage Precautions	Do not expose to heat or direct sunlight. Do not puncture container.

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name <b>American Orthodontics</b> <b>1714 Cambridge Ave</b> <b>Sheboygan Wisconsin 53081</b>	Emergency telephone number <b>(920) 457-5051</b> Telephone for information <b>(920) 457-5051</b>
Product Identification: Product Name	DSX Medic 365 Instrument Lubricant
Common Name	Embedded fluoropolymer particle lubricant
Associated Catalog Numbers	001-6015

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Octylphenoxy poly-ethoxy ethanol	9002-93-1	N/E	N/E
	Fluoropolymer	9002-64	N/E	N/E
	Propylene glycol	57-56-6	N/E	N/E
	Sorbitan (EO glycol)-Monolaurate	9005-64-5	N/E	N/E

N/E = None Established

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	>100°C
Specific Gravity	1.1
Solubility in Water	90% soluble
Vapor Pressure	N/A
Appearance	White liquid
Odor	Mild odor

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	N/A

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	None
Hazardous Decomposition Products	None
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	Irritation possible to eyes / mucous membranes
Chronic Hazards	None known
Signs & Symptoms Of Overexposure	Irritation, redness

<u>Routes of Entry:</u>	<u>Symptom:</u>	<u>Emergency / First Aid Procedures:</u>
Eye Contact	Irritation, redness	Flush with water
Skin Contact	N/A	Wipe off, flush with water
Inhalation	N/A	N/A
Ingestion	N/A	Seek medical attention as required

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Mechanical exhaust
Respiratory Protection	N/A
Protective Gloves	N/A
Eye Protection	Recommended
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Clean up
Waste Disposal Method	Dispose of in accordance with local, state and federal regulations
Handling & Storage Precautions	Keep from freezing

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name <b>American Orthodontics</b> <b>1714 Cambridge Ave</b> <b>Sheboygan Wisconsin 53081</b>	Emergency telephone number <b>(920) 457-5051</b> Telephone for information <b>(920) 457-5051</b>
---	---

## Product Identification:

Product Name	Liquid Foil
Common Name	Potassium Alginate
Associated Catalog Numbers	861-010, 861-002, 861-003

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Potassium Alginate	9005-36-1	N/E	N/E

N/E = None Established

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	N/A
Specific Gravity	N/A
Solubility in Water	Soluble
Vapor Pressure	N/A
Appearance	Fine pink powder
Odor	Faint odor in bulk

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	Combustible when finely divided and air-suspended
Special Fire Fighting Procedures	None

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	None known
Chronic Hazards	None known
Signs & Symptoms Of Overexposure	N/A

<u>Routes of Entry:</u>	<u>Symptom:</u>	<u>Emergency / First Aid Procedures:</u>
Eye Contact	Irritation due to foreign body	Flush with water
Skin Contact	N/A	N/A
Inhalation	Excessive inhalation may be annoying and can mechanically impede respiration	If large quantities have been inhaled, keep airway open, consult a physician
Ingestion	N/A	N/A

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Mechanical exhaust
-------------	--------------------

Respiratory Protection	Recommended if dust is a nuisance
Protective Gloves	Not usually needed
Eye Protection	Recommended if heavy dust
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Vacuum or sweep up. The use of water will make the material very slippery.
Waste Disposal Method	Dispose of in accordance with local, state and federal regulations
Handling & Storage Precautions	Store in a cool, dry place. Keep container closed.

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name <b>American Orthodontics 1714 Cambridge Ave Sheboygan Wisconsin 53081</b>	Emergency telephone number <b>(920) 457-5051</b> Telephone for information <b>(920) 457-5051</b>
Product Identification: Product Name	Lite-Tite Glass Ionomer Orthodontic Resin Band Cement
Common Name	Glass Ionomer Resin Cement
Associated Catalog Numbers	001-980, 001-980M

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Silicon Dioxide	60676-86-01	10mg/m3	10mg/m3
	Fluorosilicate Glass	65997-14-4	10mg/m3	10mg/m3
	Barium Glass		10mg/m3	10mg/m3
	Bis-GMA	1565-94-2	N/E	N/E
	Carboxylic Acid		N/E	N/E
	Aluminum Oxide	1344-28-1	10mg/m3	10mg/m3
	Benzoyl Peroxide	94-36-0	5mg/m3	5mg/m3
	Photo initiators	24650-42-8	N/E	N/E

N/E = none established

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	N/A
Specific Gravity	N/A
Solubility in Water	Insoluble
Vapor Pressure	N/A
Appearance	Tinted Paste
Odor	Characteristic

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	Chemical Foam, Carbon Dioxide or Dry Chemical
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	N/A

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	Peroxide for base paste, Amine for catalyst paste
Hazardous Decomposition Products	Calcium oxide, Fluoride
Hazardous Polymerization	May Occur, Avoid extreme heat / exposure to light

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	May occur for special allergic or over-exposed people
Chronic Hazards	None known
Signs & Symptoms Of Overexposure	Irritation

<u>Routes of Entry:</u>	<u>Symptom:</u>	<u>Emergency / First Aid Procedures:</u>
Eye Contact	Irritation	Wash with copious amounts of water, contact

Skin Contact	Irritation	physician Wash with soap and water immediately
Inhalation	N/A	N/A
Ingestion	Irritation	Consult a physician

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Local exhaust recommended
Respiratory Protection	N/A
Protective Gloves	Recommended
Eye Protection	Recommended
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Clean up using gloves, dispose of in an approved manner
Waste Disposal Method	Dispose of in accordance with local, state, and federal regulations
Handling & Storage Precautions	Avoid contact with skin and mucous membranes. Avoid extreme heat, sunlight or visible light. Keep closed when not in use.

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name <b>American Orthodontics</b> <b>1714 Cambridge Ave</b> <b>Sheboygan Wisconsin 53081</b>	Emergency telephone number <b>(920) 457-5051</b> Telephone for information <b>(920) 457-5051</b>
---	---

## Product Identification:

Product Name	Multiphase Products
Common Name	Chromium Cobalt Alloys
Associated Catalog Numbers	Multiphase Wire, Jones Jigs

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	Wt %	CAS Number	OSHA PEL	ACGIH TLV
	Cobalt, Co	20-35	7440-48-7	0.1	0.1
	Chromium, Cr	10-25	7440-47-3	1.0	0.5
	Molybdenum, Mo	7-12	7439-98-7	5.0	5.0
	Nickel, Ni	25-35	7440-02-0	1.0	1.0

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	High °C
Specific Gravity	7.5 – 8.5
Solubility in Water	Insoluble
Vapor Pressure	Nil at 100°C
Appearance	Solid metal
Odor	Odorless

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	N/A

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	None
Hazardous Decomposition Products	None
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	None known in form supplied
Chronic Hazards	None known in form supplied
Signs & Symptoms Of Overexposure	N/A

Routes of Entry:	Symptom:	Emergency / First Aid Procedures:
Eye Contact	Unlikely in form supplied	N/A
Skin Contact	Unlikely in form supplied	N/A
Inhalation	Unlikely in form supplied	N/A
Ingestion	Unlikely in form supplied	N/A

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	General
-------------	---------

Respiratory Protection	Required when cutting, grinding, or welding
Protective Gloves	Required when cutting, grinding, or welding
Eye Protection	Required when cutting, grinding, or welding
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Clean up
Waste Disposal Method	Dispose of in accordance with local, state, and federal regulations
Handling & Storage Precautions	None

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name <b>American Orthodontics</b> <b>1714 Cambridge Ave</b> <b>Sheboygan Wisconsin 53081</b>	Emergency telephone number <b>(920) 457-5051</b> Telephone for information <b>(920) 457-5051</b>
---	---

## Product Identification:

Product Name	Nickel Titanium Wire, Jones Jig Spring, Jet Family Springs
Common Name	Nickel Titanium Wire Material
Associated Catalog Numbers	Various

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Nickel	7440-02-0	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	High °C
Specific Gravity	8.9
Solubility in Water	Insoluble
Vapor Pressure	N/A at 100°C
Appearance	Solid metal in wire form
Odor	None

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	N/A

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	None
Hazardous Decomposition Products	None
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	May occur for special allergic or over-exposed people
Chronic Hazards	Nickel has been reported to cause cancer of the lungs and sinuses
Signs & Symptoms Of Overexposure	Unlikely in wire form. Irritation to affected areas, sneezing, metallic taste

Routes of Entry:	Symptom:	Emergency / First Aid Procedures:
Eye Contact	Mechanical irritation	Consult a physician
Skin Contact	Dermatitis in sensitive people	Wash with water, consult a physician
Inhalation	N/A	N/A
Ingestion	Not likely. Irritation in sensitive people	Consult a physician

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Mechanical exhaust
Respiratory Protection	N/A

Protective Gloves	May be used
Eye Protection	May be used
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	N/A
Waste Disposal Method	Dispose of in accordance with local, state and federal regulations
Handling & Storage Precautions	None

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name	Emergency telephone number
<b>American Orthodontics</b>	<b>(920) 457-5051</b>
<b>1714 Cambridge Ave</b>	Telephone for information
<b>Sheboygan Wisconsin 53081</b>	<b>(920) 457-5051</b>

## Product Identification:

Product Name	Plastic Bracket Primer
Common Name	Methacrylate Monomer
Associated Catalog Numbers	001-965, 001-967

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Methacrylate Monomer	80-62-6	410 mg/m <sup>3</sup>	410 mg/m <sup>3</sup>

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	101°C
Specific Gravity	0.96
Solubility in Water	1.5% at 20°C
Vapor Pressure	3.5mm at 20°C
Appearance	Clear, viscous liquid
Odor	Acrylic odor

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	CO <sub>2</sub> , Dry Chemical
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	Routine for water immiscible liquid

**SECTION V – REACTIVITY DATA**

Reactivity	Unstable
Incompatible Materials	Peroxides, high temperatures, sun light
Hazardous Decomposition Products	None
Hazardous Polymerization	May occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	Skin, mucous membrane irritation, rash
Chronic Hazards	Skin sensitization, dermatitis upon prolonged or repeated exposure
Signs & Symptoms Of Overexposure	Redness of skin, rash, headache, dizziness

<u>Routes of Entry:</u>	<u>Symptom:</u>	<u>Emergency / First Aid Procedures:</u>
Eye Contact	Irritation	Flush with copious amounts of water, contact physician
Skin Contact	Irritation	Wash with copious amounts of water
Inhalation	N/A	N/A
Ingestion	Irritation	Induce vomiting, contact physician

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Local or mechanical exhaust
Respiratory Protection	N/A

Protective Gloves	Recommended
Eye Protection	Recommended
Work / Hygienic Practices	Avoid contact with skin or mucous membranes. Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Wipe up, avoid contact with skin
Waste Disposal Method	Dispose of according to local, state, and federal requirements
Handling & Storage Precautions	Avoid exposure to light and elevated temperatures

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name	Emergency telephone number
<b>American Orthodontics</b>	<b>(920) 457-5051</b>
<b>1714 Cambridge Ave</b>	Telephone for information
<b>Sheboygan Wisconsin 53081</b>	<b>(920) 457-5051</b>

## Product Identification:

Product Name	Porcelain Primer
Common Name	Porcelain Primer
Associated Catalog Numbers	001-966

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Isopropanol	67-63-0	980 mg/m <sup>3</sup>	

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	82.3°C
Specific Gravity	.79
Solubility in Water	Soluble
Vapor Pressure	33 mm HG @ 20°C
Appearance	Clear, low viscosity liquid
Odor	Characteristic

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	Dry chemical, CO <sub>2</sub> or Foam
Unusual Fire & Explosion Hazards	May cause fire or explosion if exposed to open flame or heat. Especially dangerous if atomized in air.
Special Fire Fighting Procedures	Do not use water

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	Isocyanates, strong oxidizing agents, alkali metals
Hazardous Decomposition Products	Carbon Monoxide (CO), Carbon Dioxide (CO <sub>2</sub> )
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	Irritation of respiratory tracts, headache, dizziness or nausea
Chronic Hazards	Eye irritation and blurred vision, skin irritation, dermatitis
Signs & Symptoms Of Overexposure	As described above

Routes of Entry:	Symptom:	Emergency / First Aid Procedures:
Eye Contact	Irritation	Flush with copious amounts of water, contact physician
Skin Contact	Irritation	Wash with copious amounts of water
Inhalation	N/A	N/A
Ingestion	Irritation	Induce vomiting, contact physician

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Local or mechanical exhaust
Respiratory Protection	N/A

Protective Gloves	Recommended
Eye Protection	Recommended
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Absorb and mark container “flammable”
Waste Disposal Method	Dispose of according to local, state, and federal regulations
Handling & Storage Precautions	Avoid splashing, avoid contact with skin and mucous membranes. Keep away from sparks, heat, open flame, oxidizing agents, alkalis and Isocyanates.

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name	Emergency telephone number
<b>American Orthodontics</b>	<b>(920) 457-5051</b>
<b>1714 Cambridge Ave</b>	Telephone for information
<b>Sheboygan Wisconsin 53081</b>	<b>(920) 457-5051</b>
Product Identification:	
Product Name	Silver Solder, Brazing Alloys
Common Name	Soldering, Brazing Compounds
Associated Catalog Numbers	860-003 thru 860-009, 860-000, various products brazed or soldered during manufacture

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Copper, Cu	7440-50-8	1.0	1.0
	Gold, Au	7440-57-5	N/E	N/E
	Nickel, Ni	7440-02-0	1.0	1.0
	Palladium, Pd	7440-05-3	N/E	N/E
	Silver, Ag	7440-22-4	0.01	0.1
	Tin, Sn	7440-31-5	2.0	2.0
	Zinc, Zn	7440-66-6	5.0	10.0
N/E = None Established				

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	>620°C
Specific Gravity	8.77 – 9.41
Solubility in Water	Insoluble
Vapor Pressure	Nil at 100°C
Appearance	White to light yellow metal in wire form
Odor	Odorless

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	N/A
Special Fire Fighting Procedures	N/A

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	Strong oxidizers, peroxides, acids, chlorine
Hazardous Decomposition Products	Metal / metal oxide fume
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	None known in form supplied
Chronic Hazards	None known in form supplied
Signs & Symptoms Of Overexposure	N/A

<u>Routes of Entry:</u>	<u>Symptom:</u>	<u>Emergency / First Aid Procedures:</u>
Eye Contact	Unlikely in form supplied	N/A
Skin Contact	Unlikely in form supplied	N/A
Inhalation	Respiratory tract irritation	Remove to fresh air, consult a physician



**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name  
**American Orthodontics**  
**1714 Cambridge Ave**  
**Sheboygan Wisconsin 53081**

Emergency telephone number  
**(920) 457-5051**  
Telephone for information  
**(920) 457-5051**

## Product Identification:

Product Name Stainless Steel Products  
Common Name Stainless Steel Alloys  
Associated Catalog Numbers Arch Hooks and Stops, Arch Lock, Bands, Bondable Tongue Directors, Brackets, Diastema Closers, Expansion Screws, Facebows, Gentle Jumpers, Instruments, Jasper Jumpers, Jet Family Products, Jones Jigs, Kobayashi Hooks, Korn Mandibular Advancers, Lingual Attachments, Lingual Retainers, Ligature Wire, Lip Bumpers, Mesh Pads, Palatal Bars, Springs, Surgical Ball Hooks, Tubes, Stainless Steel Wires, Stainless Steel Products

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	Wt %	CAS Number	OSHA PEL	ACGIH TLV
	Aluminum, Al	0-5	7429-90-5	15.0	15.0
	Cobalt, Co	0-5	7440-48-7	0.1	0.1
	Copper, Cu	0-5	7440-50-8	1.0	1.0
	Chromium, Cr	13-23	7440-47-3	1.0	0.5
	Iron, Fe	50-80	7439-89-6	10.0	5.0
	Manganese, Mn	0-5	7439-96-5	5.0	5.0
	Molybdenum, Mo	0-5	7439-98-7	5.0	5.0
	Nickel, Ni	3-15	7440-02-0	1.0	1.0
	Silicon, Si	0-5	7440-21-3	15.0	10.0

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point High °C  
Specific Gravity 7.5 – 8.5  
Solubility in Water Insoluble  
Vapor Pressure Nil at 100°C  
Appearance Solid metal  
Odor Odorless

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media N/A  
Unusual Fire & Explosion Hazards N/A  
Special Fire Fighting Procedures N/A

**SECTION V – REACTIVITY DATA**

Reactivity Stable  
Incompatible Materials None  
Hazardous Decomposition Products None  
Hazardous Polymerization Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards None known in form supplied  
Chronic Hazards None known in form supplied  
Signs & Symptoms Of Overexposure N/A

Routes of Entry: \_\_\_\_\_ Symptom: \_\_\_\_\_ Emergency / First Aid Procedures: \_\_\_\_\_

Eye Contact	Unlikely in form supplied	N/A
Skin Contact	Unlikely in form supplied	N/A
Inhalation	Unlikely in form supplied	N/A
Ingestion	Unlikely in form supplied	N/A

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	General
Respiratory Protection	Required when cutting, grinding, or welding
Protective Gloves	Required when cutting, grinding, or welding
Eye Protection	Required when cutting, grinding, or welding
Work / Hygienic Practices	Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Clean up
Waste Disposal Method	Dispose of in accordance with local, state, and federal regulations
Handling & Storage Precautions	None

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

**SECTION I – PRODUCT AND COMPANY IDENTIFICATION**

Company Name	Emergency telephone number
<b>American Orthodontics</b>	<b>(920) 457-5051</b>
<b>1714 Cambridge Ave</b>	Telephone for information
<b>Sheboygan Wisconsin 53081</b>	<b>(920) 457-5051</b>

## Product Identification:

Product Name	Ultra Flux Soldering Flux
Common Name	Soldering/brazing flux
Associated Catalog Numbers	860-010, 860-011

**SECTION II – HAZARDOUS COMPONENTS**

Ingredients Considered Hazardous	Common Name	CAS Number	OSHA PEL	ACGIH TLV
	Potassium Tetraborate	1332-77-0	N/E	N/E
	Boric Acid	10043-35-3	N/E	N/E
	Potassium Bifluoride	7789-29-9	2.5 mg/m3	2.5 mg/m3
	Potassium Pentaborate	11128-29-3	N/E	N/E
	Sodium Dodecyl Sulfate	151-21-3	N/E	N/E

N/E = None Established

**SECTION III – PHYSICAL CHARACTERISTICS**

Boiling Point	N/A
Specific Gravity	1.49
Solubility in Water	Soluble
Vapor Pressure	N/A
Appearance	White paste
Odor	Odorless

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Extinguishing Media	N/A
Unusual Fire & Explosion Hazards	Toxic and corrosive fluoride compounds may be released in a fire situation
Special Fire Fighting Procedures	None

**SECTION V – REACTIVITY DATA**

Reactivity	Stable
Incompatible Materials	Strong acids and alkalis
Hazardous Decomposition Products	Emits toxic and corrosive fluoride compounds.
Hazardous Polymerization	Will Not Occur

**SECTION VI – HEALTH HAZARD DATA**

Acute Hazards	Contact may cause irritation and fluoride burns. Ingestion/inhalation may cause abdominal pain, diarrhea, vomiting, excess salivation, thirst, perspiration and painful spasms of the limbs. Large amounts may be fatal.	
Chronic Hazards	Exposure to fluorides may produce mottling of tooth enamel, embrittlement and decalcification of ligaments and vertebrae resulting in spinal stiffness.	
Signs & Symptoms Of Overexposure	As above. Also nasal discharge, nosebleeds, coughing, sore throat, labored breathing. Severe exposure may cause bronchospasm and pulmonary edema.	
Routes of Entry:	Symptom:	Emergency / First Aid Procedures:
Eye Contact	Irritation and fluoride burns	Flush with water for at least 30 minutes, contact physician

Skin Contact	Fluoride burns	Flush with water for at least 15 minutes while removing contaminated clothing and paying particular attention to skin under nails, contact physician.
Inhalation	Irritation	Remove to fresh air
Ingestion	Irritation	Do not induce vomiting. Give large quantities of water. Contact physician.

**SECTION VII – SPECIAL PROTECTION INFORMATION**

Ventilation	Local exhaust
Respiratory Protection	Recommended
Protective Gloves	Gloves required
Eye Protection	Goggles required
Work / Hygienic Practices	Avoid skin contact. Follow standard laboratory safety practices

**SECTION VIII – SAFE HANDLING MEASURES**

Precautions In Case Of Spill	Soak up using an absorbent
Waste Disposal Method	Dispose of in accordance with local, state and federal regulations
Handling & Storage Precautions	Wash thoroughly after handling. Keep container closed. Use with adequate ventilation.

---

The information contained in the MSDS is believed to be valid and accurate. American Orthodontics, however, makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions. **Reasonable safety precautions must always be observed.**

## 1. PRODUCT AND COMPANY INFORMATION

**Product Name:** TANSO Wire

**Common Name:** Nickel-Titanium-Copper-Chromium Shape Memory Alloys

**Company Name:**

American Orthodontics  
3525 Washington Avenue  
Sheboygan, WI 53081  
(920)-457-5051

**Emergency Response Number:**

(920)-457-5051

## 2. HAZARDS IDENTIFICATION

**Types of Dangerous/Toxic Categories**

Category: N/A

Dangerous Material: N/A

Toxic Material: N/A

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Single or Compound:** Compound

**Chemical Name:** Nickel-Titanium-Copper-Chromium Shape Memory Alloy

**Chemical or Structural Formula:** Ni-Ti-Cu-Cr

<u>Component</u>	<u>CAS Number</u>	<u>% by Wt.</u>
Nickel	7440-02-0	47.8-50.3
Titanium	7440-32-6	Bal
Copper	7440-50-8	5.5-6.5
Chromium	7440-47-3	Max 0.4

## 4. FIRST AID MEASURES

None required for wire.

## 5. FIRE FIGHTING MEASURES

**Firefighting Methods:** Incombustible

## 6. ACCIDENTAL RELEASE MEASURES

This is a solid material; containment should not pose problems.

## 7. HANDLING AND STORAGE

**Handling:** If abrasive cutting creates dust, avoid contact with eyes or inhalation of powders.  
Wear protective gloves when handling sharp, thin edged or non-chamfered product.

**Storage:** Do not store near a strong oxidizer or chloride chemical substances.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

**For solid metal articles:**

**Skin Protection:** To avoid possible injury to hand, gloves are required.

**For fumes or dust generated from melting or abrasive cutting:**

**OSHA Exposure Guidelines:**

<u>Component</u>	<u>Limits</u>
Nickel	Metal and insoluble compounds $1\text{mg}/\text{m}^3$ ; soluble compounds $1\text{mg}/\text{m}^3$
Titanium	Not ruled
Copper	0.1
Chromium	1.0

**ACGIH Exposure Guidelines:**

<u>Component</u>	<u>Limits</u>
Nickel	in case of skin respiration: $1\text{mg}/\text{m}^3$
Titanium	Not ruled
Copper	Fume 0.2, Dust 1.0
Chromium	0.05

**Control Equipment:** Normally unnecessary. If fumes and/or dust is generated, concentrations must be controlled within the above regulations. It is recommended to utilize air ventilation or filtration equipment.

**Eye/Face Protection:** For the processing of fine particles, mask and glasses are required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** The alloy is silver white in appearance (Ni=silver white, Ti=silver gray)

**Melting Point:** 1240 to 1310° C

**Specific Gravity:** 6.4 to 6.5 g/cm<sup>3</sup>

**Volume Resistivity:** 0.5 to 1.1μΩ M

## 10. STABILITY AND REACTIVITY

**Flash Point:** ---°C

**Auto-ignition temperature:** ---°C (Ti powder = 250°C)

**Explosive Range:** N/A

**Stability/Reaction:** In general, the compound is inert and stable.

Nickel is stable in the presence of water, unstable for thermal stability.

Titanium is unstable for water and thermal stability in case of contact with gas based on ammonia.

**Flammability:** Incombustible for compound in general.

Nickel - the powder is flammable, nickel wire will burn with sparks if heated in oxygen. Titanium - the powder is combustible with heat or flame. Spraying water onto burning titanium will cause an explosion.

**Mix Danger:** Data not available for compound in general. Materials not to be mixed with nickel and titanium are listed below:

<b>Nickel</b>	<b>Titanium</b>
Sodium Chlorinate	Sodium Chlorinate
Potassium Perchlorate	Sodium Perchlorate
Peroxyformic Acid	Sodium Peroxide
Hydrogen Peroxide	Hydrogen Peroxide
Bromine Pentafluoride	Ammonium Nitrate

## 11. TOXICOLOGICAL INFORMATION

No toxicological information is reported for compound in general. Toxicological information for its elements is as follows:

<b>Item</b>	<b>Nickel</b>	<b>Titanium</b>
<b>Skin corrosion</b>	No Data	No Data
<b>Irritant</b>	No Data	No Data
<b>Sensitivity</b>	No Data	No Data
<b>Acute toxicity</b>	Rat muscle LD <sub>50</sub> =25mg/kg	No Data
<b>Not acute toxicity</b>	No Data	No Data
<b>Disease toxicity</b>	Rat - reduction of serum cholesterol	Animal - 1mg/l at work, no malfunction
<b>Cancer</b>	No Data	No Data
<b>Variation</b>	Tumor genetic test of a hamster (out of living body) - positive	Indicate cancer on the animal test
<b>Reproductive toxicity</b>	No Data	No Data
<b>Malformation</b>	No Data	No Data

## 12. ECOLOGICAL INFORMATION

No information regarding influence on environment is reported for compound in general. Ecological information for its elements are as follows:

<b>Item</b>	<b>Nickel</b>	<b>Titanium</b>
<b>Decomposition</b>	Heat decomposition- surface will be oxidized when heated in the air	Hydrolysis- insecurity with water Heat decomposition- insecurity with water
<b>Accumulation</b>	No Data	No Data
<b>Toxicity for fish</b>	No Data	No Data
<b>Others</b>	Rat muscle LDL0=25mg/kg	No Data

## 13. DISPOSAL CONSIDERATIONS

Recyclable material should be recycled through authorized parties.

## 14. TRANSPORT INFORMATION

Cover the product with a water resistant sheet to prevent exposure to rain. Do not drop packages containing wire as contents can become loose inside packing.

## 15. REGULATORY INFORMATION

No laws applicable to compound in general. Laws applicable for its elements are as follows:

<b>Nickel</b>	<b>Titanium</b>
Disposal of solid material or liquids that come in contact may be governed by local ordinances	None

## **16. ADDITIONAL INFORMATION**

Reason for revision: New format