

## SAFETY DATA SHEET: Nitinol

**Section I – IDENTIFICATION**

<b>Product Name:</b>	Original Reflex® Wire, Heat Activated Reflex® Wire, Reflex® Aesthetic Wire (wire only, for coating see Teflon coating SDS), Braided 8 Strand Reflex Wire, Double Coil Spring, Open Coil Spring, Aesthetic Coil Spring (spring only, for coating see Teflon coating SDS), Closed Coil Spring (Spring only, for eyelets see stainless steel SDS), VektorPRO Appliance (spring only, for tube see stainless steel SDS), Torque bar
<b>Common Name:</b>	Orthodontic Wire, Springs and Auxiliaries
<b>Material:</b>	Nitinol
<b>Recommended Use:</b>	TP Orthodontics' products are intended for use in orthodontic treatment.
<b>Restrictions on Use:</b>	TP Orthodontics' products are intended for use by trained dental professionals and orthodontists, who have the primary responsibility to identify any possible contraindications that may preclude the use of this product. U.S. Federal law restricts this device to sale by or on the order of a dental professional.
<b>Product Manufacturer:</b>	TP Orthodontics, Inc. 100 Center Plaza La Porte, IN 46350-9672 USA Phone: 800-348-8856 Hours: M-Th 7a-4:30p Fax: 219-324-3029 Internet: <a href="http://www.tportho.com">www.tportho.com</a>
<b>Emergency Number:</b>	800-348-8856 Available during normal business hours: Monday-Thursday 7am to 5pm CST and Friday 7am to 12pm CST

**Section II – HAZARD IDENTIFICATION**

**General Hazard Statement:** As per OSHA Regulation 29 CFR 1910.1200, nitinol alloys are classified as articles and do not constitute a hazardous material in their solid form. The products covered by this document are manufactured items which are assembled to a specific shape and design and are generally classified as non-hazardous in their shipped form.

This product is considered an article and does not release or otherwise result in exposure to a hazardous material under normal use conditions. However, some hazardous elements contained in these products may be emitted under certain processing conditions such as grinding, burning, welding, cutting, melting, brazing, or machining. The first-aid and fire-fighting measures below are for hazardous materials which may be emitted during processing. Products in their solid form do not present a fire or explosion hazard.

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**Section III – COMPOSITION/ INFORMATION ON INGREDIENTS****Mixtures: \***

<b>Ingredient(s)</b>	<b>CAS No.</b>	<b>EC No.</b>	<b>wt%</b>
Titanium	7440-32-6	231-142-3	Balance
Nickel	7440-02-0	231-111-4	49% - 56%

*\*No minor components need to be disclosed according to the applicable regulations.*

**Section IV – FIRST-AID MEASURES**

**Skin:** Wash skin with soap and water, if rash develops, seek medical attention.

**Eyes:** Flush with plenty of water for 15 minutes; seek medical attention if irritation persists.

**Ingestion:** Do not induce vomiting. Call a physician or Poison Control Center immediately. Drink plenty of water. Never give anything by mouth to an unconscious person.

**Inhalation:** Move into fresh air. If breathing difficulty occurs, get prompt medical attention.

**Section V – FIRE-FIGHTING MEASURES**

**Flash Point and Method:** NA

**Flammability Limits:** NA

**Auto-ignition Temperature:** NA

**Melting Point:** 2390°F

**General Hazard:** Not combustible in the shipped form

**Firefighting Instructions:** No special instructions for product shipped

**Firefighting Equipment:** No special equipment for product as shipped

**Combustion Products:** No hazardous decomposition products are expected

**Section VI – ACCIDENTAL RELEASE MEASURES**

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**General:** If accidentally released, gather product and store properly. As shipped the product does not pose a hazard to the environment.

**Section VII - HANDLING AND STORAGE**

**Storage Temperature:** No special requirement.

**Storage Pressure:** Not applicable

**General Storage:** Store away from oxidizers.

**Section VIII – EXPOSURE CONTROLS/ PERSONAL PROTECTION****Personal Protection Equipment**

**Eyes:** Safety glasses recommended. If grinding nitinol, a face shield is also recommended.

**Skin:** Gloves recommended when handling nitinol.

The use of local exhaust ventilation is recommended to control emission near the source of metal being cut, ground welded or melted.

**Section IX – PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Grey metallic
<b>Odor</b>	Odorless
<b>Physical State</b>	Solid
<b>pH</b>	N/A
<b>Melting/Boiling Point</b>	BP: 5000°F MP: 2390°F
<b>Flash Point</b>	N/A
<b>Evaporation Rate</b>	N/A
<b>Flammability</b>	Nonflammable
<b>Vapor Pressure</b>	N/A
<b>Vapor Density</b>	N/A
<b>Relative Density</b>	N/A
<b>Solubility in water</b>	Insoluble
<b>Auto-ignition Temp</b>	N/A
<b>Decomposition Temp</b>	N/A
<b>Viscosity</b>	NA

**Section X – STABILITY AND REACTIVITY**

**Stability:** Product is Stable and hazard polymerization will not occur.

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**Reactivity:** None for the product as shipped.

**Incompatible Material:** Acids, bases, and oxidizers. Hydrogen and poisonous fumes may develop. Molten metal will react violently with water.

### Section XI – TOXICOLOGICAL INFORMATION

Nitinol alloy fumes and dust toxicological information is not applicable for this manufactured item in its shipping form.

### Section XII – ECOLOGICAL INFORMATION

There is no data available.

### Section XIII – DISPOSAL CONSIDERATIONS

**General:** Recycling of all metallic byproducts as scrap is strongly encouraged. If byproducts need to be treated and/or disposed of as wastes, hazardous wastes characterizations must be performed prior to treating and/or disposing. Contact appropriate parties to ensure compliance with all federal, state and local rules and regulations related to waste treatment and disposal.

### Section XIV – TRANSPORTATION INFORMATION

Not regulated by DOT.

### Section XV – REGULATORY INFORMATION

TSCA (Toxic Substances Control Act):  
Not Applicable

CERCLA (Comprehensive Response & Liability Act):  
Not Applicable

SARA Title III (Superfund Amendments & Reauthorization Act):  
311/312 Hazardous Categories – not applicable for storage of items as shipped, however if processed, end product may require reporting.  
313 Product Ingredients – subject to reporting requirements may include: nickel or titanium.

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California Safe Drinking Water Act (Prop 65) listing:

COMPONENT	CAS NUMBER
NICKEL	7440-02-0

### Section XVI – OTHER INFORMATION

All the information is collected from Supplier certificate of analysis, manufacturing process, technical files and known history from 70 years of experience and is believed to be correct as of the date issued.

By supplying above information, TP Orthodontics, Inc. assumes no legal responsibility of any kind for the accuracy, completeness, or use of the data supplied as well as the product mentioned in the foreclosure