

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Name: Rhodium coating
Common Name: Wires – Iconix
Material: Rhodium (Rh)
Restrictions on Use: American Orthodontics’ products are used for the treatment of malocclusions and craniofacial abnormalities as diagnosed by a trained dental professional or orthodontist. Federal law restricts this device to use by or on the order of a dentist or orthodontist.
EC No.: 231-125-0 (Rhodium (Rh))

REACH Registration No.: 01-2120746412-60-0000 through 01-2120746412-60-0005, 01-2120746412-60-0008 through 01-2120746412-60-0011 (Rhodium (Rh))

CAS No. / IUPAC: 7440-16-6 (Rhodium (Rh))

1.2 Relevant Identified Uses/ Uses Advised Against

Relevant identified uses: Dental/Orthodontic use only
Uses advised against: Not for Consumer use. Please see “Restrictions on Use”

1.3 Details of the Supplier of the Safety Data Sheet

Company Name:
 American Orthodontics
 3524 Washington Avenue
 Sheboygan, WI 53081
 Phone: 920-457-5051
 Fax: 920-457-1485

E-mail: info@americanortho.com
National Contact: Safety Department

1.4 Emergency Telephone Number

Emergency Response Number:
 920-457-5051
 Only available during office hours: 8:00AM – 5:00PM (Central Time)
 Language of Phone Service: English

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified as hazardous.

2.1.2 Classification according to Directive 67/548/EEC

None.

2.1.3 Additional information:

None.

2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard Pictogram(s)

Not applicable.

Signal Word(s): Not applicable.

Hazard Statements:

Not applicable.

Precautionary Statements:

Not applicable.

Supplemental Hazard information (EU):

Not applicable

2.3 Other Hazards

None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient(s)</u>	<u>CAS No.</u>	<u>EC No.</u>	<u>Wt. % Content (or Range)</u>
Rhodium (Rh)	7440-16-6	231-125-0	100%

4. FIRST-AID MEASURES

4.1 Description of First-Aid Measures

General Notes

No special requirements.

Inhalation

Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult. Seek medical attention.

Skin Contact

Remove contaminated clothing, brush material off skin, wash affected area with soap and water. Seek medical attention if symptoms persist.

Eye Contact

Flush eyes with lukewarm water, including under upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

Ingestion/Swallowing

Rinse mouth with water. Do not induce vomiting. Seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

Self-Protection of First-Aider

Not available.

4.2 Important Symptoms and Effects

May cause irritation. See Section 11 for Toxicological Information.

4.3 Medical Attention & Special Treatment Necessary

No other relevant information available.

5. FIRE AND EXPLOSION HAZARDS

5.1 Extinguishing Media

Suitable Extinguishing Media:

Use Class D or other metal extinguishing agent.

Extinguishing Media which should not be used:

No information available.

5.2 Special Exposure Hazards from Substance/Mixture

Hazardous Combustion Products:

May emit toxic rhodium oxide fumes under fire conditions.

5.3 Advice for Firefighters

Firefighting Methods:

See Section 5.1 for Extinguishing Media.

Special protective equipment for fire-fighters:

Full face, self-contained breathing apparatus and full protective clothing when necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment & Emergency Procedures

6.1.1 For Non-Emergency Personnel

Protective Equipment

Wear appropriate respiratory and protective equipment specified in Section 8.

Emergency Procedure

Isolate spill area and provide ventilation. Avoid breathing dust or fume. Avoid contact with skin and eyes.

6.1.2 For Emergency Responders

See Sections 5.3 (Advice for Firefighters) and 6.1.1 (Personal Precautions, Protective Equipment & Emergency Procedures).

6.2 Environmental Precautions

Do not allow to enter drains or to be released to the environment.

6.3 Methods & Material for Containment & Cleaning Up

6.3.1 For Containment

Sweep or scoop up. Place in properly labeled closed containers.

6.3.2 For Cleaning Up

See Section 6.3.1.

6.3.3 Other Information

Avoid dust formation. Scrap can be collected for recycling.

6.4 Reference to other sections (as applicable)

See Sections 8 and 13 for Exposure Controls / Personal Protection, and Disposal Considerations.

7. HANDLING AND STORAGE

7.1 Precautions for Safe-Handling

Protective Measures:

Measures to prevent fire:

Not available.

Measures to prevent aerosol and dust generation:

Avoid creating dust. Provide adequate ventilation if dusts are created. Avoid

breathing dust or fumes.

Measure to protect the environment

Do not allow to enter drains or to be released to the environment.

Advice on General Occupational Hygiene:

Avoid contact with skin and eyes. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. See Section 8 for information on personal protection equipment

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures & Storage Conditions

Store in a sealed container. Store in a cool, dry area. See Section 10 for more information on incompatible materials.

Packaging Materials

See Section 10 for more information on incompatible materials.

Requirements for Storage Rooms & Vessels

Store in sealed container.

Storage Class:

Not available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Component	OSHA PELs (Permissible Exposure Limits)	ACGIH TLVs (Threshold Limit Values)
Rhodium 7440-16-6	0.1 mg/m ³	1 mg/m ³

8.2 Exposure Controls

8.2.1 Appropriate Engineering Controls

Technical Measures to Prevent Exposure

Ensure adequate ventilation to maintain exposures below occupational limits.

Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

8.2.2 Personal Protective Equipment

8.2.2.1 Eye & Face Protection

Safety glasses.

8.2.2 Skin Protection

Hand Protection

Wear impermeable gloves as necessary.

Other Skin Protection

Wear protective work clothing as necessary.

8.2.2.3 Respiratory Protection

If permissible levels are exceeded, use NIOSH approved dust respirator.

8.2.2.4 Thermal Hazards

Not available.

Reference Section 5 for specific personal protective equipment advice.

8.2.3 Environmental Exposure Controls

Technical Measures to Prevent Exposure

Do not allow to enter drains or to be released to the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic Physical & Chemical Properties

Appearance:	Solid in various forms. Silver metallic.
Odor:	Odorless.
Odor Threshold:	Not determined.
pH:	Not applicable.
Melting Point/Freezing Point:	1966 °C (melting point)
Initial Boiling Point & Boiling Range:	3727 ± 100 °C
Flash Point:	Not applicable.
Evaporation Rate:	Not applicable.
Flammability (solid, gas):	Not applicable.
Upper/Lower Flammability or Explosive Limits:	No data.
Vapor Pressure:	No data.
Vapor Density:	Not applicable.
Relative Density:	12.41 g/cm ³
Solubility(ies):	Insoluble in water.
Partition Coefficient: n-octanol/water):	Not determined.
Auto-Ignition Temperature:	No data.
Decomposition Temperature:	No data.
Viscosity:	Not applicable.
Explosive Property:	Not available.
Oxidizing:	Not available.

9.2 Other Information

None.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data.

10.2 Chemical Stability

Stable under recommended storage conditions.

10.3 Conditions of Instability

See Conditions to Avoid.

10.4 Possibility of Hazardous Reactions

When heated in air at high temperature, rhodium oxide may be formed.

10.5 Conditions to Avoid

High temperature in air, dusting conditions.

10.6 Incompatible Materials

Sulfuric acid, fluorine.

10.7 Hazardous Decomposition Products

Rhodium oxide fume.

10.8 Hazardous Polymerization

No data.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Information

Acute Toxicity

No data. Likely routes of exposure: inhalation, skin, eyes.

Chronic Health Effects

Rhodium metal is considered inert.

Skin Corrosion

Not available.

Serious Eye Damage/Irritation

Not available.

Respiratory/Skin Sensitization

Not available.

Carcinogenicity

NTP: Not identified as carcinogenic. IARC: Not identified as carcinogenic.

Aspiration Hazard

Not available.

Signs & Symptoms of Exposure

May cause irritation.

Medical Conditions Generally Aggravated by Exposure

Not available.

Other Potential Health Effects

None. Physical and toxicological characteristics of the substance are not fully known.

11.1.1 Acute Toxicity

Method: Not available.

Species: Not available.

Routes of Exposure: Not available.

Effective Dose: Not available.

Exposure Limit: Not available.

Results: Not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute (Short-Term) Toxicity: Not available.

Chronic (Long-Term) Toxicity: Not available.

12.2 Persistence and Degradability

Abiotic Degradation: Not available.

Physical- and photo-chemical elimination: Not available.

Biodegradation: Not available.

12.3 Bio accumulative Potential

Partition coefficient n-octanol/water (log Kow): Not available.

Bio concentration Factor (BCF): Not available.

12.4 Mobility in Soil

Known or predicted distribution to environmental compartments: Not available.

Surface tension: Not available.
Adsorption/Desorption: Not available.

- 12.5 Results of PBT and vPvB Assessment**
Not available
- 12.6 Other Adverse Effects**
No further relevant information available.

13. DISPOSAL CONSIDERATIONS

- 13.1 Waste Treatment Methods**
 - 13.1.1 Product/Packaging disposal:**
Dispose of in accordance with Federal, State and Local regulations.
Waste Codes/Waste Designations according to LoW: Not available.
 - 13.1.2 Waste Treatment – relevant information:**
Not available.
 - 13.1.3 Sewage Disposal –relevant information:**
Not available.
 - 13.1.4 Other Disposal recommendations:**
None.

14. TRANSPORTATION INFORMATION

- 14.1 UN Number**
Not applicable. Not regulated.
- 14.2 UN Proper Shipping Name**
Not applicable. Not regulated.
- 14.3 Transport Hazard Class(es)**
Not applicable. Not regulated.
- 14.4 Packing Group**
Not applicable. Not regulated.
- 14.5 Environmental Hazards**
Not applicable.
- 14.6 Special Precautions for User**
None.
- 14.7 Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code**
Not a marine pollutant.

15. REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - EU Regulations**
Authorizations and/or restrictions on use: Not available.
Authorization: Not available.
Restrictions on use: Not available.
 - Other EU Regulations:**
Information according to 1999/13/EEC about limitation of emissions of volatile organic compounds (VOC-Guideline): Not available.
 - National Regulations (USA):**
TSCA Listed: All components are listed.
HMIS Ratings:
Health: 0 Flammability: 0 Physical: 0
NFPA Ratings:

International Regulations:

Canada WHMIS Classification (CPR, SOR/88-66): Not available.

15.2 Chemical Safety Assessment:

No chemical safety assessment has been carried out for this substance/mixture by the supplier.

16. ADDITIONAL INFORMATION

16.1 Indication of changes/revision to SDS:

1. New format
2. Inclusion of EC Requirements
3. *Revision Date:* 05/08/2019

16.2 Abbreviations and acronyms:

OSHA – Occupational Safety and Health Administration
 ACGIH – Association Advancing Occupational and Environmental Health
 NIOSH – National Institute for Occupational Safety and Health
 NTP – National Toxicology Program
 IARC – International Agency for Research on Cancer
 TSCA – Toxic Substances Control Act
 WHMIS – Workplace Hazardous Materials Information System
 HMIS – Hazardous Materials Identification System
 NFPA – National Fire Protection Association

16.3 Key literature references and sources for data

1. Guidance on the Compilation of Safety Data Sheets; European Chemical Agency (ECHA); Version 2.1, February 2014
2. Regulation (EC) No 1272/2008 of the European Parliament and the Council of 16 December 2008 on classification, labelling, and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

16.4 Classification and procedure used to derive classification for mixtures according to Regulation (EC) 1272/2008[CLP]:

None.

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in the SDS was obtained from sources that we believe are reliable and is believed to be valid and accurate. American Orthodontics, however, makes no warranty, express or implied, regarding its correctness of the information provided. The conditions or method of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. If the product is used as a component in another product or used in a way other than recommended by the Company, this SDS information may not be applicable. **Reasonable safety precautions must always be observed.**