



## Safety Data Sheet

04-11-0001 V 5.20

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Version Data 5.20

### Product Description

Stainless Steel wire, Bands, Tubes, Metal Bracket, Lip Bumper, Face bow, Lingual retainers, SS Coils, Ligature ties, Koby Ties, Super Lock, Steiner Wedge, X Tube, SS Springs, Tongue Spikes, Bite Wings, Buttons, Bondable Eyelets, Activator tubes, Face Mask, Abrasive holder, Protector Disc Guard, Micro Saw, Pliers, Instruments.

### REF NUMBER

#### Restrictions to use:

For use only by dental professionals.

**Manufacturer** : International Orthodontic Services  
**Address** : 12811 Capricorn St. Stafford, TX 77477 USA  
**Phone No,** : 1888-10S-8882 ( 1888-461-8882)  
**Emergency Phone No,** : +1 832 342 9487

**DISCLAIMER:** The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. IOS MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the IOS product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a IOS product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the IOS product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

## HAZARDS IDENTIFICATION

#### Classification of the substance or mixture



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

#### Label elements

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

#### Hazards Pictograms



## STAINLESS STEEL ALLOY

GHS08 GHS07

**Signal word** Danger

**Hazard-determining components of labeling:**

nickel

**Hazard statements**

May cause an allergic skin reaction.

Suspected of causing cancer.

Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

If on skin: Wash with plenty of water.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

**NFPA ratings (scale 0-4)**

Health=2

Fire=0

Reactivity =0

**HMIS-ratings (scale 0-4)**

Health=\*2

Fire=0

Reactivity=0

**Other hazards**

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

## COMPOSITION / INFORMATION ON INGREDIENTS

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
1332-37-2	Iron oxide	50-100%
7440-47-3	Chromium	10-<25%
7440-02-0	Nickel	2.5-<10%
7440-44-0	Carbon	2.5-<10%
7727-37-9	Nitrogen	2.5-<10%
7704-34-9	Sulfur	2.5-<10%
7439-96-5	Manganese	0.1-≤2.5%

## FIRST-AID MEASURES

## STAINLESS STEEL ALLOY

### Description of first aid measures

#### General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

#### Information for doctor:

**Most important symptoms and effects, both acute and delayed** No further relevant information available.

### Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## FIRE-FIGHTING MEASURES

### Extinguishing media

**Suitable extinguishing agents:** The product is not flammable.

**Special hazards arising from the substance or mixture** No further relevant information available.

### Advice for firefighters

**Protective equipment:** No special measures required.

## ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

**Environmental precautions:** No special measures required.

**Methods and material/or containment and cleaning up:** No special measures required.

### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## HANDLING AND STORAGE

### Handling:

**Precautions for safe handling** Not applicable.

**Information about protection against explosions and fires:** Not applicable.

### Conditions for safe storage, including any incompatibilities

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**Specific end use(s)** No further relevant information available.

## EXPOSURE CONTROL/PERSONAL PROTECTION

**Additional information about design of technical systems:** No further data; see item 7.

### Control parameters

#### Components with limit values that require monitoring at the workplace:

##### 1332-37-2 Iron oxide

REL	Long-term value: 1 mg/m <sup>3</sup> as Fe
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TLV	Long-term value: 1 mg/m <sup>3</sup> as Fe
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##### 7440-47-3 chromium

## STAINLESS STEEL ALLOY

PEL	Long-term value: 1 * 0.5** mg/m <sup>3</sup> *metal;**inorganic compds., as Cr
REL	Long-term value: 0.5* mg/m <sup>3</sup> *metal+inorg.compds.as Cr;See Pocket Guide App. C
TLV	Long-term value: 0.5 mg/m <sup>3</sup>
<b>7440-02-0 nickel</b>	
PEL	Long-term value: 1 mg/m <sup>3</sup>
REL	Long-term value: 0.015 mg/m <sup>3</sup> as Ni; See Pocket Guide App. A
TLV	Long-term value: 1.5* mg/m <sup>3</sup> elemental, *inhalable fraction
<b>7727-37-9 nitrogen</b>	
TLV	withdrawn TLV, see App. F; simple asphyxiant
<b>7439-96-5 manganese</b>	
PEL	Ceiling limit value: 5 mg/m <sup>3</sup> as Mn
REL	Short-term value: 3 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup> fume, as Mn
TLV	Long-term value: 0.02 * 0.1 * mg/m <sup>3</sup>

**Additional information:** The lists that were valid during the creation were used as basis.

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

Keep away from foodstuff, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.

#### Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device.  
In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

#### Protection of hands

##### Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

##### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### Eye protection

Safety glasses

## PHYSICAL AND CHEMICAL PROPERTIES

## STAINLESS STEEL ALLOY

<b>Information on basic physical and chemical properties</b>	
<b>General Information</b>	
<b>Appearance:</b>	
<b>Form:</b>	Solid
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.
<b>pH-value:</b>	Not applicable.
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	-195 °C (-319 °F)
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous):</b>	Not determined.
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not applicable.
<b>Density at 20 °C (68 °F):</b>	5.25946 gcm <sup>3</sup> (43.89 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in   Miscibility with</b>	
<b>Water:</b>	Insoluble.
<b>Partition coefficient (n-octano/Jwater):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0%
<b>Solids content:</b>	95.0%
<b>Other information</b>	No further relevant information available.

## STABILITY AND REACTIVITY

### Reactivity

#### Chemical stability

**Thermal decomposition | conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.

**Conditions to avoid** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## TOXICOLOGICAL INFORMATION

### Information on toxicological effects

#### Acute toxicity:

#### Primary irritant effect:

**on the skin:** No irritant effect.

**on the eye:** No irritating effect.

**Sensitization:** Sensitization possible through skin contact.

#### Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

*IARC (International Agency for Research on Cancer)*

## STAINLESS STEEL ALLOY

7440-47-3 Chromium	1
7440-02-0 Nickel	3
· <b>NTP (National Toxicology Program)</b>	
7440-02-0 Nickel	R
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>	
None of the ingredients is listed.	

## ECOLOGICAL INFORMATION

### Toxicity

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Behavior in environmental systems:**

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

**Additional ecological information:**

**General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

## DISPOSAL CONSIDERATION

**Waste treatment methods**

**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

## TRANSPORT INFORMATION

· <b>UN-Number</b>	
· <b>DOT, ADN, IMDG, IATA</b>	Not regulated
· <b>UN proper shipping name</b>	
· <b>DOT, ADN, IMDG, IATA</b>	Not regulated
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADN, IMDG, IATA</b>	
· <b>Class</b>	Not regulated
· <b>Packing group</b>	
· <b>DOT, IMDG, IATA</b>	Not regulated
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	-

## REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific/or the substance or mixture  
Sara

· **Section 355 (extremely hazardous substances):**

**STAINLESS STEEL ALLOY**

None of the ingredients is listed.

**Section 313 (Specific toxic chemical listings):**

7440-47-3	Chromium
7440-02-0	Nickel
7439-96-5	Manganese
7440-50-8	Copper

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

7440-02-0          nickel

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**

7440-47-3	Chromium	D
7439-96-5	manganese	D
7440-50-8	copper	D

**TLV (Threshold Limit Value established by ACGIH)**

7440-47-3	chromium	IA4
7440-02-0	nickel	IA5

**NIOSH-Ca (National Institute/or Occupational Safety and Health)**

7440-02-0 nickel

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System(GHS).

**Hazard pictograms**



**GHS07      GHS08**

**Signal word** Danger

**Hazard-determining components of labeling:**

nickel

**Hazard statements**

May cause an allergic skin reaction.

Suspected of causing cancer.

Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Specific treatment (see on this label).

## STAINLESS STEEL ALLOY

Wash contaminated clothing before reuse.

If exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

If on skin: Wash with plenty of water. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## OTHER INFORMATION

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This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing SDS:** Environment protection department.

**Abbreviations and acronyms:**

ADR: Accord European sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELJNCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials identification System (USA)

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Care. 2: Carcinogenicity, Hazard Category 2

STOT RE I: Specific target organ toxicity - Repeated exposure, Hazard Category 1