

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : White Karat Gold
Product name : Ortho FlexTech

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For professional use only.

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Reliance Orthodontic Products Inc.
1540 West Thorndale Ave. Itasca, IL 60143 USA
630-773-4009, during normal business hours

Emergo Europe, Prinsessgracht 20
2514 AP The Hague, The Netherlands

Australian Sponsor: Emergo Australia, 201 Sussex St.
Darling Park, Tower II, Level 20
Sydney, NSW 2000 Australia

1.4. Emergency telephone number

Emergency number CHEMTREC – 24 Hour Hazmat Emergency Communications Center
Domestic: 1-800-424-9300, Outside the US: 1-703-527-3887, collect calls accepted

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Non-hazardous in solid, bulk form

Dust or fine turnings may cause:

Eye Irritation H319
Respiratory Irritation H335
If inhaled, metal fume H333

Full text of H-phrases: see section 16

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

GHS08

Signal word (CLP) :

Warning

Hazard statements (CLP) :

Bulk, solid material is non-hazardous
Hazard statements for dust or fine turnings:
H317 - May cause an allergic skin reaction
H319 – May cause eye irritation
H335 – May cause respiratory irritation
H351 – Suspected of causing cancer – Category 2 (Nickel component)
Hazard statement for metal fume:
H333 – May be harmful if inhaled

Precautionary statements (CLP) :

Bulk, solid material is non-hazardous
For dust or fine turnings:
P210 – Keep away from heat/sparks/open flames/ hot surfaces. No smoking
P242 – Use only non-sparking tools
P243 – Take precautionary measures against static discharge.

Ortho FlexTech

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

P264 – Wash skin thoroughly after handling.
P280 - Wear protective gloves, eye protection
P281 – Use personal protective equipment, if required.
P305+P351 + P338 – If in eyes, rinse with water for 15 minutes. Remove contact lenses, if present and continue rinsing.
P342 + P311 If experiencing respiratory symptoms, call a poison center or physician
P370 + P378 – In case of fire: Use dry sane, dry chemical, CO2 or Class D Extinguisher.
For metal fume:
P260 – Do not breathe dust/fume/gas/mist/vapor/spray.
P285 – In case of inadequate ventilation, wear respiratory protection
Dust or fine turnings may be irritating to mucous membranes, respiratory tract or eyes upon contact.

Hazards not otherwise classified:

2.3. Other hazards

Nickel may cause sensitization. Nickel is a suspected carcinogen.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

INGREDIENTS	%	CAS #	Classification	EC Number
Gold	1.0-76.1	7440-57-5	H391,H33, H335	231-165-9
Silver	0.3 – 86.0	7440-22-4	H391,H33, H335	231-131-3
Copper	2.0 – 90.8	7440-50-8	H391,H33, H335	231-159-6
Nickel	0.0 – 22.0	7440-02-0	H317,H391,H33, H335, H351	231-111-4
Zinc	0.3 – 22.0	7440-66-6	H391,H33, H335	231-175-3

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

inhalation	: Inhalation of dust or metal fumes may cause Argyria, a blue green discoloration of the skin, mucous membranes and eyes. Also, may cause irritation of the respiratory tract or metal fume fever with symptoms of fever, chills, nausea, chest tightness or metallic taste. If inhaled, remove from exposure, move to fresh air and seek immediate medical attention. Use mechanical ventilation or respiratory protection to avoid inhaling metal fumes.
skin contact	: Localized Argyria or dermatitis may result from contact. Contact may cause allergic reaction or sensitization. Remove contaminated clothing. Thoroughly wash affected area with soap and water. Consult with doctor.
eye contact	: May cause irritation. In the case of eye contact, flush with large amounts of water for at least 15 minutes and seek immediate medical attention.
ingestion	: If ingested, may cause generalized Argyria, and may irritate gastrointestinal tract. Seek emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Exposure to dust or metal fumes may irritate respiratory system and result in metal fume fever.

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray, alcohol resistant foam, dry chemical or CO2 extinguisher
Unsuitable extinguishing media	: No data available

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Firefighting instructions	: Use self-contained breathing apparatus
Protection during firefighting	: No data available.

Ortho FlexTech

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective Equipment : Use appropriate personal protective equipment based on site conditions.
Emergency procedures : Avoid breathing dust or fumes. Use adequate ventilation. Remove all ignition sources if dust is present. Note that dust and fine shavings may be flammable.

6.1.2. For emergency responders

Protective equipment : Use appropriate personal protective equipment based on site conditions.
Emergency procedures : Control ignition sources and use non-sparking tools when handling dust or finely ground turnings which may be flammable.

6.2. Environmental precautions

No special precautions for bulk solid material. Do not let dust or turnings enter drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep or shovel bulk solid and store in sealed container prior to disposal/recycle. Avoid static discharge when collecting dust or fine turnings which may be flammable.

6.4. Reference to other sections

See Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Further processing of solid material may generate combustible dust or turnings. Provide adequate ventilation and routine maintenance to prevent the buildup of combustible dust. Implement control measures to reduce the generation of static discharge where dust is created. For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Conditions for Safe Storage : Keep container closed when not in use.
Incompatibilities : Acetylene, Ammonia, oxidizers, hydrogen peroxide, strong acids and bases.
:

7.3. Specific end use(s)

Apart from those mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Gold CAS 7440-57-5		
PEL	Not Established	OSHA Permissible Exposure Limit Table Z-1
REL	Not Established	NIOSH Recommended Exposure Limit
TWA	Not Established	USA ACGIH Threshold Limit Value (TLV)

Silver CAS 7440-22-4		
PEL	0.01 mg/m3	OSHA Permissible Exposure Limit Table Z-1
REL	0.01 mg/m3	NIOSH Recommended Exposure Limit
TWA	0.1 mg/m3	USA ACGIH Threshold Limit Value (TLV)

Copper CAS 7440-50-8		
PEL	1 mg/m3 (dust or mist)	OSHA Permissible Exposure Limit Table Z-1
PEL	0.1 mg/m3 (fume)	OSHA Permissible Exposure Limit Table Z-1
REL	1 mg/m3 (dust or mist)	NIOSH Recommended Exposure Limit
REL	0.1 mg/m3 (fume)	NIOSH Recommended Exposure Limit

Ortho FlexTech

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Copper CAS 7440-50-8		
TWA	0.2 mg/m ³	USA ACGIH Threshold Limit Value (TLV)

Nickel CAS 7440-02-0		
PEL	1 mg/m ³	OSHA Permissible Exposure Limit Table Z-1
REL	0.015 mg/m ³	NIOSH Recommended Exposure Limit
TWA	1.5 mg/m ³	USA ACGIH Threshold Limit Value (TLV)

Zinc CAS 7440-66-6		
PEL	Not Established	OSHA Permissible Exposure Limit Table Z-1
REL	Not Established	NIOSH Recommended Exposure Limit
TWA	Not Established	USA ACGIH Threshold Limit Value (TLV)

8.2. Exposure controls

- 8.2.1 Appropriate Engineering Controls : Provide local exhaust when cutting, grinding, or heating. Use good industrial hygiene practices. Keep dust and fume buildup to a minimum. Avoid static discharge where dust or turnings are generated.
- 8.2.2 Personal Protective Equipment:
- Respiratory Protection : Respiratory protection is not required when handling bulk solid materials. Where nuisance dusts are generated, use N95 or type P1 (EN143) dust mask. Use air purifying cartridge respirator equipped with N100, R100 or P100 filters when exposed to metal fumes.
 - Skin Protection : Wear leather or Kevlar gloves when handling metal stock to prevent cuts. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
 - Eye Protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
- 8.2.3 Environmental Exposure Controls : Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid metal yellowish to white in color
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 1,063°C
Freezing point	: No data available
Boiling point	: 2808°C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available

Ortho FlexTech

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Vapor pressure	: 1 mm Hg @ 1869°C
Relative vapor density at 20 °C	: No data available
Relative density	: 19.31 g/cc at 25 °C (77 °F)
Solubility	: Insoluble
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal temperatures and pressures

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Overheating during brazing, soldering or melting

10.5. Incompatible materials

Avoid acetylene, ammonia, oxidizers, hydrogen peroxide, strong acids and bases

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available.
Skin corrosion/irritation	: No data available.
Serious eye damage/irritation	: No data available.
Respiratory or skin sensitization	: No data available.
Germ cell mutagenicity	: No data available.
Carcinogenicity	: Nickel which is a component of this product present at levels greater than or equal to 0.1% has been identified as a probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP or OSHA
Reproductive toxicity	: Nickel is suspected to cause reproductive toxicity
Specific target organ toxicity (single exposure)	: Nickel may cause sensitization
Specific target organ toxicity (repeated exposure)	: No data available
Aspiration hazard	: No data available
Potential Adverse human health effects and symptoms	: No data available

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data available

Ortho FlexTech

Safety Data Sheet

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12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB Assessment

No data available

12.5. Other Adverse Effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste Treatment Methods : Surplus materials may have reclaim value. Dispose of unsalvageable material in accordance with applicable Federal, State/Provincial and Local regulations.

SECTION 14: Transport information

Not regulated as a dangerous good per US DOT 49 CFR 171-180 or UN Dangerous Goods List.

14.1 UN Number

Not Assigned

14.2 UN Proper Shipping Name

Not Applicable

14.3 Transport Hazard Class

Not Regulated – no hazard assigned

14.4 Packing Group

Not Applicable

14.5 Environmental Hazards

No data Available

14.6 Transport in Bulk

Not Applicable

14.7 Special Precaution for User

No Special Precautions

SECTION 15: Regulatory information

15.1. Safety, Health and Environmental regulations/legislation specific for substance or mixture

TSCA Listed: All components are listed.

Regulation (EC) No 1272/2008 (CLP): N/A

Canada WHMIS Classification (CPR, SOR/88-66): N/A

HMIS Ratings: Health: 0 Flammability: 0 Physical: 0

NFPA Ratings: Health: 0 Flammability: 0 Instability: 0

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

SECTION 16: Other information

NFPA Rating

Health Hazard: 0

Fire Hazard: 0

Reactivity Hazard: 0

HMIS Rating

Health Hazard: 0

Fire Hazard: 0

Reactivity Hazard: 0

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.