

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

EC Representative:

Emergo Europe, Molenstraat 15, 2513 BH, 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 : 1-401-732-6200

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

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

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

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 (GHS-US) :

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.
P264 – Wash skin thoroughly after handling.
P280 - Wear protective gloves, eye protection

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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

Hazards not otherwise classified:

Dust or fine turnings may be irritating to mucous membranes, respiratory tract or eyes upon contact.

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.

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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.

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/m ³ | OSHA Permissible Exposure Limit Table Z-1 |
| REL | 0.01 mg/m ³ | NIOSH Recommended Exposure Limit |
| TWA | 0.1 mg/m ³ | USA ACGIH Threshold Limit Value (TLV) |
| Copper CAS 7440-50-8 | | |
| PEL | 1 mg/m ³ (dust or mist) | OSHA Permissible Exposure Limit Table Z-1 |
| PEL | 0.1 mg/m ³ (fume) | OSHA Permissible Exposure Limit Table Z-1 |
| REL | 1 mg/m ³ (dust or mist) | NIOSH Recommended Exposure Limit |
| REL | 0.1 mg/m ³ (fume) | NIOSH Recommended Exposure Limit |
| TWA | 0.2 mg/m ³ | USA ACGIH Threshold Limit Value (TLV) |

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| 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 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.
- Respiratory Protection
 - Skin Protection : Wear leather or Kevlar gloves when handling metal stock to prevent cuts.
 - Eye Protection : Wear ANSI Z87.1 approved safety glasses with side shields
- 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 | : No data available |
| Odor threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapor pressure | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| 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

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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

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. Subject to federal disposal regulations: US EPA 40CFR262

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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

CERCLA Sections 102a/103 Hazardous Substances (40CFR 302.04): Nickel is regulated under CERCLA. The Reportable quantity for Nickel is 100 pounds.

SARA 302 Components: No components of this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards: Silver, copper and nickel are subject to reporting requirements of SARA Title II, Sections 311/312

SARA 313 Components: Silver, copper and nickel are subject to reporting under SARA Title III, Section 313.

Massachusetts Right to Know Components:

Silver CAS 7440-22-4
Copper CAS 7440-50-8
Nickel CAS 7440-02-0
Zinc CAS 7440-66-6

Pennsylvania Right to Know Components:

Silver CAS 7440-22-4
Copper CAS 7440-50-8
Nickel CAS 7440-02-0
Zinc CAS 7440-66-6

New Jersey Right to Know Components:

Silver CAS 7440-22-4
Copper CAS 7440-50-8
Nickel CAS 7440-02-0
Zinc CAS 7440-66-6

California Proposition 65 Components: This product contains Nickel which is known to the State of California to cause cancer, birth defects and any other reproductive harm.

SECTION 16: Other information

NFPA Rating

Health Hazard : 1

Fire Hazard: 0

Reactivity Hazard: 0

HMIS Rating

Health Hazard : 2

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