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

- **Product identifier**
- **Trade name:** Evolution Lite
- **Relevant identified uses of the substance or mixture and uses advised against**
  No further relevant information available.
- **Application of the substance / the preparation**
  Manufacture of dental protheses
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
  Ivoclar Vivadent Inc.
  175 Pineview Drive, Amherst, N.Y. 14228
  USA
  Tel. +1 800 533 6825
  Fax +1 716 691 2285

  Ivoclar Vivadent Inc.
  1-6600 Dixie Road
  Mississauga, Ontario
  L5T 2Y2
  Canada
  Phone: +1 905 670 8499
  Fax: +1 905 670 3102
- **Information department:** Quality Assurance / Regulatory Affairs
- **Emergency telephone number:**
  24 Hour Emergency Assistance:
  Emergency-Call USA - Infotrac: 1-800-535-5053
  Emergency-Call Canada - Canutec: 1-613-996-6666

  General MSDS Assistance:
  US: 1-800-533-6825
  Canada: 1-800-263-8182

2 Hazards identification

- **Classification of the substance or mixture**
  Ox. Sol. 2  H272  May intensify fire; oxidizer.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  Oxidizing
  Contact with combustible material may cause fire.
- **Information concerning particular hazards for human and environment:**
  Avoid breathing of grinding dust and vapours. Melted material may cause burns.
- **Classification system:**
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **GHS label elements**
  The product is classified and labelled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**
  
  ![GHS03](https://example.com/ghs03.png)
- **Signal word** Danger

(Contd. on page 2)
Safety Data Sheet  
acc. to ISO/DIS 11014  

Printing date 12/14/2012Reviewed on 12/14/2012Version number 4

Trade name: Evolution Lite

- **Hazard statements**  
  May intensify fire; oxidizer.

- **Precautionary statements**  
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
  Take any precaution to avoid mixing with combustibles.  
  Wear protective gloves/protective clothing/eye protection/face protection.  
  Keep/Store away from clothing/combustible materials.  
  In case of fire: Use for extinction: CO2, powder or water spray.  
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**  
  Alloys do not require a label, providing they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market.

- **Classification system:**  
  - **NFPA ratings (scale 0 - 4)**  
    
    Health = 0  
    Fire = 0  
    Reactivity = 0  
  - **HMIS-ratings (scale 0 - 4)**  
    
    Health = 0  
    Fire = 0  
    Reactivity = 0  
  - **Other hazards**
  - **Results of PBT and vPvB assessment**  
    - **PBT:** Not applicable.  
    - **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures  
- **Description:** Dental alloy

- **Dangerous components:**
  - 7440-05-3 palladium 25-50%  
  - 7440-74-6 indium 1-<10%  
  - 7440-22-4 silver 1-<10%  
  - 7440-55-3 gallium 1-<2.5%

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
  - **After inhalation:**  
    Grinding dust: Supply fresh air; consult doctor in case of complaints.  
    In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** After contact with the molten product, cool rapidly with cold water.
  - **After eye contact:**  
    Grinding dust: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.  
    Mechanical effects only.
Trade name: Evolution Lite

- 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.

5 Firefighting 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: Do not inhale explosion gases or combustion gases.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up: Pick up mechanically.
- 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.

7 Handling and storage

- Handling:
- Precautions for safe handling
  - Extractors are required on all machines used for thermal processing or splinter removal processes.
- Information about protection against explosions and fires: No special measures required.
- 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.

8 Exposure controls/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:

<table>
<thead>
<tr>
<th>Component</th>
<th>REL (mg/m³)</th>
<th>TLV (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-74-6 indium</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
Trade name: Evolution Lite

7440-22-4 silver

PEL ( ) 0.01 mg/m³
metal and soluble compounds (as Ag)
REL ( ) 0.01 mg/m³
TLV ( ) 0.1 mg/m³
metal: dust and fume

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

- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures: Usual hygienic measures for dental practice.
    - Breathing equipment: Use respiratory protective device against the effects of fumes/dust/aerosol.
  - Protection of hands:
    Protective gloves should always be worn during mechanical and thermal processing.
    After use of gloves apply skin-cleaning agents and skin cosmetics.

- Material of gloves
  Mechanical processing:
  - Leather gloves
  - Strong gloves
  Thermal processing:
  - Heat protection gloves

- Penetration time of glove material
  The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:
  Always wear safety goggles during mechanical processing (grinding, sawing /cutting, drilling, milling).

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
  - Appearance:
    Form: Solid
    Color: White
    Odor: Odorless
    Odor threshold: Not determined.
  - pH-value: Not applicable.

- Change in condition
  Melting point/Melting range: 1100–1260 °C (2012–2300 °F)
  Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.

- Flammability (solid, gaseous): Not determined.

- Auto igniting: Product is not self-igniting.

- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits:
  Lower: Not determined.
  Upper: Not determined.

- Vapor pressure: Not applicable.
Trade name: Evolution Lite

- Density at 20 °C (68 °F): 12.8 g/cm³ (106.816 lbs/gal)
- Relative density: Not determined.
- Vapour density: Not applicable.
- Evaporation rate: Not applicable.
- Solubility in / Miscibility with Water: Insoluble.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.
- Solvent content:
  - Solids content: 100 %
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability: Stable under normal handling and storage conditions.
- 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: None under normal conditions of storage and use.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - Primary irritant effect:
      - on the skin: No irritant effect.
      - on the eye: No irritating effect.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    - Fumes or dusts generated from cutting or grinding operations may cause respiratory irritation.
- Carcinogenic categories
  - NTP (National Toxicology Program)
    - None of the ingredients is listed.

12 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.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.

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

14 Transport information

- **UN-Number**
  - DOT
  - ADR, ADN, IMDG, IATA
  - NA3077
  - Void

- **UN proper shipping name**
  - ADR, ADN, IMDG, IATA
  - Void

- **Transport hazard class(es)**
  - DOT
    - Class
    - Label
    - 9 Miscellaneous dangerous substances and articles.
    - 9

- **ADR, ADN, IMDG, IATA**
  - Class
  - Void

- **Packing group**
  - DOT
  - ADR, IMDG, IATA
  - III
  - Void

- **Environmental hazards:**
  - Marine pollutant:
  - No

- **Special precautions for user**
  - Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

- **UN "Model Regulation":**
  - -

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

  - **Sara**

  - **Section 355 (extremely hazardous substances):**
    - None of the ingredients is listed.
Trade name: Evolution Lite

- **Section 313 (Specific toxic chemical listings):**
  - 7440-22-4 silver
  - 7440-50-8 copper

- **TSCA (Toxic Substances Control Act):**
  - 7440-57-5 Gold
  - 7440-22-4 silver
  - 7440-50-8 copper
  - 7440-06-4 platinum
  - 7440-74-6 indium
  - 7439-88-5 iridium

- **Proposition 65**
  - **Chemicals known to cause cancer:**
    - None of the ingredients is listed.
  - **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)**
    - 7440-22-4 silver D
    - 7440-50-8 copper D
  - **TLV (Threshold Limit Value established by ACGIH)**
    - None of the ingredients is listed.
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    - None of the ingredients is listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)**
    - None of the ingredients is listed.

- **GHS label elements**
  - The product is classified and labelled according to the Globally Harmonized System (GHS).
  - **Signal word** Danger
  - **Hazard pictograms**
    - GHS03

  - **Hazard statements**
    - May intensify fire; oxidizer.
    - **Precautionary statements**
      - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
      - Take any precaution to avoid mixing with combustibles.
      - Wear protective gloves/protective clothing/eye protection/face protection.
      - Keep/Store away from clothing/combustible materials.
Trade name: Evolution Lite

(Contd. of page 7)

In case of fire: Use for extinction: CO2, powder or water spray.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- National regulations:

- Other regulations, limitations and prohibitive regulations
  The product is a medical device according to the EC-directive 93/42/EEC.
  This product is classified as a medical device under US and Canadian regulations and has been reviewed by the US Food and Drug Administration and Health Canada.

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

16 Other information

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.

- Abbreviations and acronyms:
  ADR: Accord européen 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
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)