1 Identification

- **Product identifier**
  - **Trade name:** d.SIGN 67

- **Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

- **Application of the substance / the mixture**
  - Manufacture of dental prothesis

- **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 SDS Assistance:
      - US: 1-800-533-6825
      - Canada: 1-800-263-8182

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - Ox. Sol. 2 H272 May intensify fire; oxidizer.
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2A H319 Causes serious eye irritation.

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

- **Hazard pictograms**
  - GHS03
  - GHS07

- **Signal word**
  - Danger

- **Hazard statements**
  - May intensify fire; oxidizer.
  - Causes skin irritation.
  - Causes serious eye irritation.

(Contd. on page 2)
Trade name: d.SIGN 67

· Precautionary statements
  Keep away from heat.
  Take any precaution to avoid mixing with combustibles.
  Wear protective gloves / eye protection / face protection.
  Wear protective gloves.
  Wear eye protection / face protection.
  Keep/Store away from clothing/combustible materials.
  Wash thoroughly after handling.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Specific treatment (see on this label).
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  In case of fire: Use for extinction: CO2, powder or water spray.
  If on skin: Wash with plenty of water.
  Take off contaminated clothing and wash it before reuse.
  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 = 1
  Fire = 0
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)
  Health = 1
  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 50-100%
  7440-22-4 silver 10-<25%
  7440-31-5 tin ≤10%
  7440-55-3 gallium 1-<2.5%
  7440-74-6 indium 1-<2.5%

* 4 First-aid measures

· Description of first aid measures
· General information: No special measures required.
40.1.5

· 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.

· After swallowing: Seek medical treatment.

· 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 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: 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>7440-22-4 silver</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Long-term value: 0.01 mg/m³</td>
<td></td>
</tr>
<tr>
<td>REL Long-term value: 0.01 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TLV Long-term value: 0.1 mg/m³</td>
<td>metal: dust and fume</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7440-31-5 tin</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Long-term value: 2 mg/m³</td>
<td>metal</td>
</tr>
<tr>
<td>REL Long-term value: 2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TLV Long-term value: 2 mg/m³</td>
<td>metal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7440-74-6 indium</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>REL Long-term value: 0.1 mg/m³</td>
<td>as In</td>
</tr>
<tr>
<td>TLV Long-term value: 0.1 mg/m³</td>
<td>as In</td>
</tr>
</tbody>
</table>

· 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
  · Odour threshold: Not determined.
  · pH-value: Not applicable.
Safety Data Sheet
acc. to OSHA HCS

Trade name: d.SIGN 67

(Contd. of page 4)

- Change in condition
  - Melting point/Melting range: 1150–1270 °C (2102–2318 °F)
  - Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.

- Flammability (solid, gaseous): Not determined.

- Auto igniting: Product is not selfigniting.

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

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

- Vapor pressure: Not applicable.

- Density at 20 °C (68 °F): 10.8 g/cm³ (90.126 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.

(Contd. on page 6)
**40.1.5 Carcinogenic categories**

- **NTP (National Toxicology Program)**
  - None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**
  - None of the ingredients is listed.

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**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.

- **Additional ecological information:**
  - **General notes:** Generally not hazardous for water
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
  - **Other adverse effects:** No further relevant information available.

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**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**
    - NA3077

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

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

- **Transport hazard class(es)**
  - **DOT**
    - **Class**
      - 9 Miscellaneous dangerous substances and articles
    - **Label**
      - 9
  - **ADR, ADN, IMDG, IATA**
    - **Class**
      - Void

- **Packing group**
  - **DOT**
    - III
  - **ADR, ADN, IMDG, IATA**
    - Void
### 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.
    - **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.
Trade name: d.SIGN 67

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

- **Hazard pictograms**
  
  ![GHS03](image1)
  ![GHS07](image2)

- **Signal word** Danger

- **Hazard statements**
  May intensify fire; oxidizer.
  Causes skin irritation.
  Causes serious eye irritation.

- **Precautionary statements**
  Keep away from heat.
  Take any precaution to avoid mixing with combustibles.
  Wear protective gloves / eye protection / face protection.
  Wear protective gloves.
  Wear eye protection / face protection.
  Keep/Store away from clothing/combustible materials.
  Wash thoroughly after handling.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Specific treatment (see on this label).
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  In case of fire: Use for extinction: CO2, powder or water spray.
  If on skin: Wash with plenty of water.
  Take off contaminated clothing and wash it before reuse.
  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 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.**

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**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.

- **Date of preparation / last revision** 06/23/2015 / 6

- **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
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: 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)
  Ox. Sol. 2: Oxidising Solids, Hazard Category 2
  Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

(Contd. on page 9)
<table>
<thead>
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Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

* Data compared to the previous version altered.