1 Identification of the substance or mixture and of the supplier

- **Product identifier**
- **Trade name:** d.SIGN 84
- **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
  - **Importer:**
  Ivoclar Vivadent Ltd.
  12 Omega St, Rosedale, Auckland
  New Zealand
  Tel: + 64 9 914 9999 / Fax: + 64 9 914 9990
- **Further information obtainable from:**
  Regulatory Affairs
  sds@ivoclarvivadent.com
- **Emergency telephone number:** 0800 764 766 (National Poison Centre - 24 hours / 7 days)

2 Hazards identification

- **Classification of the substance or mixture**
  - Ox. Sol. 2   H272  May intensify fire; oxidiser.
  - Skin Corr. 1B H314  Causes severe skin burns and eye damage.
  - Eye Dam. 1   H318  Causes serious eye damage.
- **Label elements**
- **GHS label elements**
  The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**
  ![GHS pictograms]
  GHS03  GHS05
- **Signal word** Danger
- **Hazard-determining components of labelling:**
  - gallium
- **Hazard statements**
  May intensify fire; oxidiser.
  Causes severe skin burns and eye damage.
- **Precautionary statements**
  Take any precaution to avoid mixing with combustibles.
  Wear protective gloves/protective clothing/eye protection/face protection.
  **IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower.
  **IF INHALED:** Remove person to fresh air and keep comfortable for breathing.

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Trade name: d.SIGN 84

Immediately call a POISON CENTER/doctor. 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). Store locked up. 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.

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/Information on ingredients

- Chemical characterisation: Mixtures
- Description: Dental alloy

- Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-22-4</td>
<td>231-131-3</td>
<td>silver</td>
<td>10-25%</td>
</tr>
<tr>
<td>7440-74-6</td>
<td>231-180-0</td>
<td>indium</td>
<td>2.5-10%</td>
</tr>
<tr>
<td>7440-55-3</td>
<td>231-163-8</td>
<td>gallium</td>
<td>Skin Corr. 1B, H314</td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed hazard phrases refer to section 16.

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.

- 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.
    - Use fire extinguishing methods suitable to surrounding conditions.
  - Special hazards arising from the substance or mixture: No further relevant information available.
Safety Data Sheet
in accordance with HSNO

Printing date 30.01.2020
Version number 7
Revision: 30.01.2020

Trade name: d.SIGN 84

- 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 fire - and explosion protection: 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 facilities: No further data; see item 7.
- Control parameters
  - Ingredients with limit values that require monitoring at the workplace:
    | CAS: 7440-22-4 silver | WES | Long-term value: 0.1* 0.01** mg/m³ |
    | | *metal; ** soluble compds., as Ag |
    | CAS: 7440-74-6 indium | WES | Long-term value: 0.1 mg/m³ |
    | as In |
- Additional information: The lists valid during the making were used as basis.
- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
  Usual hygienic measures for dental practice and dental laboratories.
- Respiratory protection: 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 material gloves

(Contd. on page 4)
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Solid
      - Colour: White
    - Odour: Odourless
    - Odour threshold: Not determined.
  - pH-value: Not applicable.
  - Change in condition
    - Melting point/freezing point: 1140–1335 °C
    - Initial boiling point and boiling range: Undetermined.
  - Flash point: Not applicable.
  - Flammability (solid, gas): Not determined.
  - Auto-ignition temperature: Product is not self-igniting.
  - Explosive properties: Product does not present an explosion hazard.
  - Explosion limits:
    - Lower: Not determined.
    - Upper: Not determined.
  - Vapour pressure: Not applicable.
  - Density at 20 °C:
    - 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.
49.0

· 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
· Skin corrosion/irritation No irritant effect.
· Serious eye damage/irritation No irritating effect.
· Respiratory or skin sensitisation No sensitising effects known.
· Additional toxicological information:
Fumes or dusts generated from cutting or grinding operations may cause respiratory irritation.

12 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability No further relevant information available.
· Behaviour in environmental systems:
· Bioaccumulative potential No further relevant information available.
· Mobility in soil No further relevant information available.
· Additional ecological information:
· General notes: Not hazardous for water.
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
· Other adverse effects 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 packaging:
· Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number
· ADR/RID/ADN, ADN, IMDG, IATA Void
· UN proper shipping name
· ADR/RID/ADN, ADN, IMDG, IATA Void

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- **Transport hazard class(es)**
  - ADR/RID/ADN, ADN, IMDG, IATA: Void

- **Packing group**
  - ADR/RID/ADN, IMDG, IATA: Void

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

- **Special precautions for user**
  - Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

- **Transport/Additional information:**
  - Product is not classified as a dangerous good for transport (ADR, IMDG, IATA).

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

**15 Regulatory information**

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

  - **New Zealand Inventory of Chemicals**
    All ingredients are listed.

  - **HSNO Approval numbers**
    - CAS: 7440-22-4 silver HSR003077
    - CAS: 7440-74-6 indium HSR003007

  - **GHS label elements**
    - The product is classified and labelled according to the Globally Harmonised System (GHS).
    - Hazard pictograms
      - GHS03
      - GHS05

- **Signal word** Danger

- **Hazard-determining components of labelling:**
  - gallium

- **Hazard statements**
  - May intensify fire; oxidiser.
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  - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
  - 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).
  - Store locked up.

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

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P8** OXIDISING LIQUIDS AND SOLIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

**National regulations:**
- **Other regulations, limitations and prohibitive regulations**
  The product is a medical device according to the Directive 93/42/EEC.
- **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.

**Relevant phrases**
- H314 Causes severe skin burns and eye damage.

**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
- IATA: International Air Transport Association
- 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)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Ox. Sol. 2: Oxidizing solids – Category 2
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1