1 Identification

- **Product identifier**
- **Trade name:** W-5

- **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
    - LST 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.

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

- **Hazard pictograms**

  ![GHS03]

- **Signal word** Danger
- **Hazard statements**
  - May intensify fire; oxidizer.
- **Precautionary statements**
  - Keep away from heat.
  - Take any precaution to avoid mixing with combustibles.
  - Wear protective gloves / eye protection / face protection.
  - Keep/Store away from clothing/combustible materials.
Material Safety Data Sheet
acc. to ISO 11014

Trade name: W-5

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 25-30%
  - 7440-22-4 silver 10-<25%
  - 7440-31-5 tin 1-<3%

**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.
- **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.

(Contd. of page 3)
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:
  - 7440-22-4 silver
    - EL Short-term value: 0.03 mg/m³
    - Long-term value: 0.01 mg/m³
    - as Ag
  - EV Long-term value: 0.1* 0.01** mg/m³
    - *metal; **water-soluble compounds (as silver)
  - 7440-31-5 tin
    - EL Long-term value: 2 mg/m³
    - metal
    - EV Long-term value: 2* 0.1** mg/m³
      - *metal, oxide, inorg. compds.; **org. compds.: Skin
  - Additional information: The lists that were valid during the creation were used as basis.
40.1.5 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 break through 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
    - Form: Solid
    - Color: White
    - Odor: Odorless
    - Odour threshold: Not determined.

  - pH-value: Not applicable.

- Change in condition
  - Melting point/Melting range: 1185–1230 °C
  - 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: 13.8 g/cm³

- 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.
Material Safety Data Sheet
acc. to ISO 11014

Trade name: W-5

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.
  - OSHA-Ca (Occupational Safety & Health Administration)
    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.
  - Additional ecological information:
    - General notes: Generally not hazardous for water
    - Results of PBT and vPvB assessment
      - PBT: Not applicable.
      - vPvB: Not applicable.

(Contd. on page 6)
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**: NA3077
- **DOT**: Void
- **TDG, ADN, IMDG, IATA**: Void
- **UN proper shipping name**: Void
- **DOT**: 9 Miscellaneous dangerous substances and articles
- **Class**: 9
- **Label**: Void
- **TDG, ADN, IMDG, IATA**: Void
- **Packing group**: III
- **DOT**: Void
- **TDG, IMDG, IATA**: Void
- **Environmental hazards**: No
- **Marine pollutant**: Not applicable.
- **Special precautions for user**: Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 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"**: -

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
Trade name: W-5

- **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.

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

- **Signal word** Danger
- **Hazard statements**
  - May intensify fire; oxidizer.
- **Precautionary statements**
  - Keep away from heat.
  - Take any precaution to avoid mixing with combustibles.
  - Wear protective gloves / 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.

- **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.

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 / 4

Abbreviations and acronyms:
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

* Data compared to the previous version altered.