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

· Product identifier

· Trade name: Golden Ceramic

• **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 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: 1-613-996-66666

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



· Signal word Danger

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(Contd. of page 1) · 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: Void · Information pertaining to particular dangers for man and environment: 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 = 0Fire = 0Reactivity = 0· HMIS-ratings (scale 0 - 4) • Health = 0HEALTH FIRE 0 Fire = 0**REACTIVITY O** 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: Mixture of the substances listed below with nonhazardous additions.

-		
· Dangerous	components:	
7440-06-4	platinum	1-
7440-05-3	palladium	1-
7440-28-0	thallium	0.1

4 First aid measures

· Description of first aid measures

- After inhalation: Grinding dust: Supply fresh air; consult doctor in case of complaints.
- 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.

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-<10% -≤2.5% .1-<1%

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• *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 Wear protective equipment. Keep unprotected persons away.
- 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. Only adequately trained personnel should handle this product. For use in dentistry only.
- · Information about protection against explosions and fires: Keep ignition sources away Do not smoke.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · 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

7440-0	6-4 platinum			
	0.002 mg/m ³ soluble salts, as Pt			
	$1* 0.002** mg/m^3$ *Metal **soluble salts, as Pt			
TLV()	1* 0.002** mg/m ³ *metal **soluble salts, as Pt			

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PEL () 0.1 mg/m^3	· Chin
& soluble compounds, as TI,	; SKIN
REL () 0.1 mg/m ³ & soluble compounds, as TI,	; Skin
$TLV() 0.02* mg/m^3$	
& soluble compounds, as Ti,	; *inh. fraction; Skin
Additional information: The lists th	at were valid during the creation were used as basis.
Exposure controls	
Personal protective equipment:	
General protective and hygienic me	
Wash hands before breaks and at the	
Usual hygienic measures for dental Broathing againment: Use respirat	practice. ory protective device against the effects of fumes/dust/aerosol.
Protection of hands:	by protective device against the effects of futness dustraerosol.
0	worn during mechanical and thermal processing.
After use of gloves apply skin-clean	
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
The exact break through time has to observed.	be found out by the manufacturer of the protective gloves and has to
The exact break through time has to observed. Eye protection:	
The exact break through time has to observed. Eye protection:	be found out by the manufacturer of the protective gloves and has to nechanical processing (grinding, sawing /cutting, drilling, milling).
The exact break through time has to observed. Eye protection:	
The exact break through time has to observed. Eye protection:	nechanical processing (grinding, sawing /cutting, drilling, milling).
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper	nechanical processing (grinding, sawing /cutting, drilling, milling). ties
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and o	nechanical processing (grinding, sawing /cutting, drilling, milling). ties
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and a General Information	nechanical processing (grinding, sawing /cutting, drilling, milling). ties
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and a General Information	nechanical processing (grinding, sawing /cutting, drilling, milling). ties
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and General Information Appearance:	nechanical processing (grinding, sawing /cutting, drilling, milling). Ties chemical properties
The exact break through time has to observed. Eye protection: Always wear safety goggles during r Physical and chemical proper Information on basic physical and General Information Appearance: Form: Color:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid
The exact break through time has to observed. Eye protection: Always wear safety goggles during no Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and General Information Appearance: Form:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless
The exact break through time has to observed. Eye protection: Always wear safety goggles during r Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor: Odor: Odour threshold: pH-value: Change in condition	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable.
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor: Odor: Odor: Odor: PH-value: Change in condition Melting point/Melting range:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable. 1060–1140 °C (1940–2084 °F)
The exact break through time has to observed. Eye protection: Always wear safety goggles during r Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor: Odor: Odour threshold: pH-value: Change in condition	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable.
The exact break through time has to observed. Eye protection: Always wear safety goggles during r Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor: Odor: Odour threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable. 1060–1140 °C (1940–2084 °F)
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and General Information Appearance: Form: Color: Odor: Odor: Odor: Odour threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Flash point:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable. 1060–1140 °C (1940–2084 °F) Undetermined.
The exact break through time has to observed. Eye protection: Always wear safety goggles during r Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor: Odor: Odor: Odor: PH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Flash point: Flammability (solid, gaseous):	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable. 1060–1140 °C (1940–2084 °F) Undetermined. Not applicable.
The exact break through time has to observed. Eye protection: Always wear safety goggles during r Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor: Odor: Odor: PH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Flash point: Flammability (solid, gaseous): Auto igniting:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable. 1060–1140 °C (1940–2084 °F) Undetermined. Not applicable. Contact with combustible material may cause fire.
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor: Odor: Odor: Odor: Odour threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Flash point: Flammability (solid, gaseous): Auto igniting: Danger of explosion:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable. 1060–1140 °C (1940–2084 °F) Undetermined. Not applicable. Contact with combustible material may cause fire. Product is not selfigniting.
The exact break through time has to observed. Eye protection: Always wear safety goggles during n Physical and chemical proper Information on basic physical and of General Information Appearance: Form: Color: Odor: Odor: Odor: Odor: PH-value: Change in condition Melting point/Melting range:	nechanical processing (grinding, sawing /cutting, drilling, milling). ties chemical properties Solid Yellow Odorless Not determined. Not applicable. 1060–1140 °C (1940–2084 °F) Undetermined. Not applicable. Contact with combustible material may cause fire. Product is not selfigniting.

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Upper:	Not determined.	
· Vapor pressure:	Not applicable.	
• Density at 20 •C (68 •F):	18.5 g/cm ³ (154.383 lbs/gal)	
· Relative density	Not determined.	
· Vapour density	Not applicable.	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with		
Water:	Insoluble.	
· Partition coefficient (n-octanol/wa	ter): Not determined.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
· Solvent content:		
Organic solvents:	0.0 %	
Solids content:	100.0 %	
• 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.

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· Behavior in environmental systems:

- · Bioaccumulative potential No further relevant information available.
- \cdot **Mobility in soil** No further relevant information available.

· Additional ecological information:

- \cdot **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.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. 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.

UN-Number	
DOT, ADR, ADN, IMDG, IATA	Void
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Void
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA	
Class	Void
Packing group	
DOT, ADR, IMDG, IATA	Void
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex	c II of
MARPOL73/78 and the IBC Code	Not applicable.

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.

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D

· Section 313 (Specific toxic chemical listings):

7440-22-4 silver

• TSCA (Toxic Substances Control Act):

All ingredients are listed.

· 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

· 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).

• Hazard pictograms



· Signal word Danger

· 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.

· 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.

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LIS A

· 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)
 * Data compared to the previous version altered.