

## 1. IDENTIFICATION OF SUBSTANCES / PREPARATION AND COMPANY

Product Name: Fidelity G40  
 Product Code: 899, 901

Application: Dental casting alloy

Company: Davis Schottlander & Davis Ltd  
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## 2. HAZARD IDENTIFICATION

**Eyes:** Contact with eyes may cause severe irritation and possible eye burns.  
**Skin:** May cause severe irritation and possible burns.  
**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhoea.  
**Inhalation:** May cause irritation and burns to the respiratory tract.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| METAL     | %     | SYMBOL | CAS NO    | ACGIH 8 HR TLV   | OSHA 8 HR PEL  |
|-----------|-------|--------|-----------|--|--|
| Silver    | 45.99 | Ag     | 7440-22-4 | 0.1mg/M <sup>3</sup>                                     | 0.1mg/M <sup>3</sup>                                     |
| Gold      | 39.90 | Au     | 7440-57-5 | Not established  | Not established  |
| Copper    | 7.59  | Cu     | 7440-50-8 | 1mg/M <sup>3</sup> (Dust)<br>0.1mg/M <sup>3</sup> (Fume) | 1mg/M <sup>3</sup> (Dust)<br>0.2mg/M <sup>3</sup> (Fume) |
| Palladium | 4     | Pd     | 7440-05-3 | No data  | No data  |
| Indium    | 1.5   | In     | 7440-74-6 | 0.1mg/M <sup>3</sup>                                     | 0.1mg/M <sup>3</sup> TWA                                 |
| Zinc      | 1     | Zn     | 7440-66-6 | 5mg/M <sup>3</sup>                                       | No data  |
| Lithium   | x     | Li     | 7439-93-2 | No data  | No data  |
| Iridium   | x     | Ir     | 7439-88-5 | No data  | No data  |

## 4. FIRST AID MEASURES

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids.

**Skin:** Scrub skin thoroughly with soap and water.

**Ingestion:** If victim is conscious and alert give 2-4 cupfuls of milk or water. Induce vomiting. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Remove affected person to fresh air and assist with additional oxygen if necessary. Get first aid if other symptoms appear.

## 5. FIRE FIGHTING MEASURES

This material is fire and explosion resistant. Heating beyond the melting range may generate fumes which are not flammable.

## 6. ACCIDENTAL RELEASE MEASURES

Use proper personal protective equipment as described in Section 8

## 7. HANDLING AND STORAGE

Avoid inhalation of fumes while melting and dust while grinding. Wash hands thoroughly before eating or smoking to avoid ingestion.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

|                     |   |
|---------------------|---|
| <b>Respiratory:</b> | Provide general ventilation and local exhaust to keep levels below the TLV stated in Section 3. Wear a NIOSH approved respirator for dust exceeding the TLVs. |
| <b>Hand:</b>        | Latex gloves are recommended while grinding. Heat resistant gloves should be worn while casting and handling hot metals or moulds.                            |
| <b>Eyes:</b>        | Wear eye protection suitable to each individual operation.  |
| <b>Other:</b>       | Wear apron, lab coat or other protective clothing.  |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                |                 |                              |                 |
|--------------------------------|-----------------|------------------------------|-----------------|
| <b>Appearance:</b>             | Rich Yellow.    | <b>Odour:</b>                | Not applicable. |
| <b>Flammability:</b>           | Not applicable. | <b>pH:</b>                   | Not applicable. |
| <b>Flash point:</b>            | Not applicable. | <b>Melting range:</b>        | 860-925°C       |
| <b>Auto flammability:</b>      | Not applicable. | <b>Boiling point:</b>        | Not applicable. |
| <b>Explosive properties:</b>   | Not applicable. | <b>Oxidising properties:</b> | Not applicable. |
| <b>Solubility (water/fat):</b> | Insoluble.      | <b>Vapour pressure:</b>      | Not applicable. |

## 10. STABILITY AND REACTIVITY

At ordinary and high (below the melting range) temperatures, the material oxidises but is stable. At very high temperatures the alloy produces fumes.

## 11. TOXICOLOGY INFORMATION

|                |  |
|----------------|--|
| <b>Silver:</b> | Absorption of silver compounds by ingestion, inhalation or through broken skin can cause argyria, a permanent bluish-grey discolouration of the skin, conjunctiva and mucous membranes. Generalised argyria develops after 2-25 years of exposure. There are no systematic effects or symptoms and no physical disability. Silver is considered an experimental equivocal tumorigenic agent by RTECS criteria. |
| <b>Indium:</b> | May cause foetal effects based upon animal studies. May cause lung damage and blood abnormalities. Target organs: Blood, kidneys, liver and lungs.   |

## 12. ECOLOGICAL INFORMATION

This is an environmentally friendly material. With proper dust collecting equipment 100% of this alloy can be recycled.

## 13. DISPOSAL CONSIDERATIONS

Whenever possible recover dust because it has economical value.

## 14. TRANSPORT INFORMATION

No specific instructions.

## 15. REGULATORY INFORMATION

No specific instructions.

## 16. FURTHER INFORMATION

The data given above covers exclusively the safety requirements of the product(s) and is based on our current knowledge and experience. It does not signify any warranty with regards to the products properties. This product is only supplied for specific uses in dentistry and must be used in accordance with the directions for use.