

## 1. IDENTIFICATION OF SUBSTANCES / PREPARATION AND COMPANY

Product Name: Matchmate 620  
 Product Code: 704, 705  
  
 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	CAS No.	%	ACGIH 8 HR TLV	OSHA 8 HR PEL
Gold	7440-57-5	2	Not established	Not established
Palladium	7440-05-3	74.7849	No data	No data
Ruthenium	7440-18-8	x	No data	No data
Indium	7440-74-6	6.5	0.1 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup> TWA
Gallium	7440-55-3	5.0001	No data	No data
Copper	7440-50-8	10.3	0.1 mg/m <sup>3</sup> (Fume) 1 mg/m <sup>3</sup> (Dust)	0.2 mg/m <sup>3</sup> (Fume) 1 mg/m <sup>3</sup> (Dust)
Zinc	7440-66-6	1.2	5 mg/m <sup>3</sup>	No data
Lithium	7439-93-2	x	No data	No data

NOTE: 'x' denotes a content of less than one percent

## 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

The 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

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

**Storage:** No special requirements.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Respiratory:** 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.

**Hand:** Latex gloves are recommended while grinding. Heat resistant gloves should be worn while casting and handling hot metals or moulds.

**Eyes:** Wear eye protection suitable to each individual operation.

**Other:** Wear apron, lab coat or other protective clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	White.	<b>Odour:</b>	Odourless.
<b>Flammability:</b>	Not applicable.	<b>pH:</b>	Not applicable.
<b>Flash point:</b>	Not applicable.	<b>Melting range:</b>	1140-1255°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

**Gallium:** May cause bone marrow depression.

**Indium:** May cause foetal effects based upon animal studies. May cause lung damage and blood abnormalities. Target organs: Blood, kidneys, liver, lungs.

**Ruthenium:** The toxicological properties of this substance have not been fully investigated. May be harmful if swallowed.

## 12. ECOLOGICAL INFORMATION

This is an environmentally friendly material. With proper dust collecting equipment, 00% of this alloy can be recycled.

**13. DISPOSAL CONSIDERATIONS**

Recover dust and solid waste and recycle. Otherwise dispose of by waste contractor in landfill or incinerator in accordance with local regulations.

**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.

- TLV      Threshold Limit Value 8hr
- PEL      Personal Exposure Limit