

<b>PRODUCT CODE</b>	<b>SY14 ECO B</b>
<b>FINENESS</b>	<b>375 (9K)</b>
<b>COLOR</b>	<b>LIGHT YELLOW</b>



### Brief description

Master alloy for 9, 10 and 14K yellow gold casting. Gold produced with SY14 ECO B has a light-yellow shade. This alloy is suitable for casting in open and closed systems, with or without wax settings of stones. Gold produced with SY14 ECO B is not suitable for age hardening.

### Suitable applications

Plates&Sheets	Solid Chains	Hollow Chains	Soldered Tubes	CNC Works	Open Casting	Closed Casting	Wax Setting
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

### Proprieties

<b>Silver Quantity</b>	4%	Amount of silver contained in the alloy (%)
<b>Density</b>	10.8	(g/cm <sup>3</sup> )
<b>Melting Range</b>	875-915	Solidus - Liquidus (°C)
<b>Hardness</b>	90-/	Annealed - Hardened (HV)

### Mould casting

Put first the alloy in the crucible and cover it with pure gold. Heat the metal 50-100°C more than Liquidus temperature, while protecting the melting with a reducing flame or protective atmosphere. Heat the mould at 150-200°C and, when the melting temperature is reached, stir the metal and pour it in the mould; after casting, open the mould and cool the metal immediately.

### Continuous casting

When using a continuous casting machine, it is preferable to pre-melt gold and alloy. Alloyed gold can then be poured in a mould or in water and re-melted in the continuous casting machine, or poured directly in the machine's crucible, heating it until it reaches alloy's liquidus temperature. Always protect the melting using a reducing flame over the molten metal. Machine's speed should be as high as possible.

### Mechanical work

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### Annealing

Heat the metal in protective atmosphere at 650°C for 10-30min (depending on the quantity), then quickly cool it in a solution of 90% water and 10% alcohol or in warm water (≈40°C).

### Hardening

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### Casting

Flasks' temperature should be between 500-700°C, based on casted items' size and models' intricacy. It is preferable to pre-melt the alloy with gold before casting. Casting temperature is 50-100°C higher than the liquidus temperature. After casting wait 15-20 min before cooling the metal in warm water (≈40°C). In case of casting with stones, wait 30-45 min.

### Pickling

Sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) at 10% concentration and 50-60°C can be used to remove surface oxide. Rinse with attention the metal after pickling.

### Scraps reuse

Up to 50% scraps can be added to the melting. Always pay attention to the cleanliness of the scraps, de-greasing and pickling before adding them to new metal is suggested.

<b>PRODUCT CODE</b>	<b>SY14 ECO B</b>
<b>FINENESS</b>	<b>417 (10K)</b>
<b>COLOR</b>	<b>LIGHT YELLOW</b>



**Brief description**

Master alloy for 9, 10 and 14K yellow gold casting. Gold produced with SY14 ECO B has a light-yellow shade. This alloy is suitable for casting in open and closed systems, with or without wax settings of stones. Gold produced with SY14 ECO B is not suitable for age hardening.

**Suitable applications**

Plates&Sheets	Solid Chains	Hollow Chains	Soldered Tubes	CNC Works	Open Casting	Closed Casting	Wax Setting
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**Proprieties**

<b>Silver Quantity</b>	4%	Amount of silver contained in the alloy (%)
<b>Density</b>	11.3	(g/cm <sup>3</sup> )
<b>Melting Range</b>	890-920	Solidus - Liquidus (°C)
<b>Hardness</b>	95-/-	Annealed - Hardened (HV)

**Mould casting**

Put first the alloy in the crucible and cover it with pure gold. Heat the metal 50-100°C more than Liquidus temperature, while protecting the melting with a reducing flame or protective atmosphere. Heat the mould at 150-200°C and, when the melting temperature is reached, stir the metal and pour it in the mould; after casting, open the mould and cool the metal immediately.

**Continuous casting**

When using a continuous casting machine, it is preferable to pre-melt gold and alloy. Alloyed gold can then be poured in a mould or in water and re-melted in the continuous casting machine, or poured directly in the machine's crucible, heating it until it reaches alloy's liquidus temperature. Always protect the melting using a reducing flame over the molten metal. Machine's speed should be as high as possible.

**Mechanical work**

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**Annealing**

Heat the metal in protective atmosphere at 650°C for 10-30min (depending on the quantity), then quickly cool it in a solution of 90% water and 10% alcohol or in warm water (≈40°C).

**Hardening**

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**Casting**

Flasks' temperature should be between 500-700°C, based on casted items' size and models' intricacy. It is preferable to pre-melt the alloy with gold before casting. Casting temperature is 50-100°C higher than the liquidus temperature. After casting wait 15-20 min before cooling the metal in warm water (≈40°C). In case of casting with stones, wait 30-45 min.

**Pickling**

Sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) at 10% concentration and 50-60°C can be used to remove surface oxide. Rinse with attention the metal after pickling.

**Scraps reuse**

Up to 50% scraps can be added to the melting. Always pay attention to the cleanliness of the scraps, de-greasing and pickling before adding them to new metal is suggested.

<b>PRODUCT CODE</b>	<b>SY14 ECO B</b>
<b>FINENESS</b>	<b>585 (14K)</b>
<b>COLOR</b>	<b>LIGHT YELLOW</b>



### Brief description

Master alloy for 9, 10 and 14K yellow gold casting. Gold produced with SY14 ECO B has a light-yellow shade. This alloy is suitable for casting in open and closed systems, with or without wax settings of stones. Gold produced with SY14 ECO B is not suitable for age hardening.

### Suitable applications

Plates&Sheets	Solid Chains	Hollow Chains	Soldered Tubes	CNC Works	Open Casting	Closed Casting	Wax Setting
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### Proprieties

<b>Silver Quantity</b>	4%	Amount of silver <u>contained</u> in the alloy (%)
<b>Density</b>	12.6	(g/cm <sup>3</sup> )
<b>Melting Range</b>	835-880	Solidus - Liquidus (°C)
<b>Hardness</b>	95-/-	Annealed - Hardened (HV)

### Mould casting

Put first the alloy in the crucible and cover it with pure gold. Heat the metal 50-100°C more than Liquidus temperature, while protecting the melting with a reducing flame or protective atmosphere. Heat the mould at 150-200°C and, when the melting temperature is reached, stir the metal and pour it in the mould; after casting, open the mould and cool the metal immediately.

### Continuous casting

When using a continuous casting machine, it is preferable to pre-melt gold and alloy. Alloyed gold can then be poured in a mould or in water and re-melted in the continuous casting machine, or poured directly in the machine's crucible, heating it until it reaches alloy's liquidus temperature. Always protect the melting using a reducing flame over the molten metal. Machine's speed should be as high as possible.

### Mechanical work

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### Annealing

Heat the metal in protective atmosphere at 620°C for 10-30min (depending on the quantity), then quickly cool it in a solution of 90% water and 10% alcohol or in warm water (≈40°C).

### Hardening

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### Casting

Flasks' temperature should be between 500-700°C, based on casted items' size and models' intricacy. It is preferable to pre-melt the alloy with gold before casting. Casting temperature is 50-100°C higher than the liquidus temperature. After casting wait 15-20 min before cooling the metal in warm water (≈40°C). In case of casting with stones, wait 30-45 min.

### Pickling

Sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) at 10% concentration and 50-60°C can be used to remove surface oxide. Rinse with attention the metal after pickling.

### Scraps reuse

Up to 50% scraps can be added to the melting. Always pay attention to the cleanliness of the scraps, de-greasing and pickling before adding them to new metal is suggested.