

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



**Brief description**

Pre-Master alloy for yellow gold 9, 10 and 14K. The formulation of SY14 ECO E makes it suitable for casting applications. The colour obtained with SY14 ECO E is light yellow. The high amount of deoxidizing elements contained in this alloy gives shining casted objects in open or closed systems.

**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</b>	10%	Amount of silver contained in the alloy
<b>Density</b>	11.1	(g/cm <sup>3</sup> )
<b>Melting Range</b>	840-915	Solidus - Liquidus (°C)
<b>Hardness</b>	100-/-	Annealed - Hardened (HV)

**Mould casting**

Put first the alloy in the crucible and cover it with gold. Heat the metal 50-100°C more than Liquidus temperature, while protecting the melting with a reducing flame or keeping it in protective atmosphere. Heat the mould at 180-200°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**

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**Mechanical work**

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**Annealing**

Heat the metal in protective atmosphere at 700°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 50-150°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 15-30% 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, removal of sprue button is suggested. 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 E</b>
<b>FINENESS</b>	<b>417 (10K)</b>
<b>COLOR</b>	<b>YELLOW</b>



**Brief description**

Pre-Master alloy for yellow gold 9, 10 and 14K. The formulation of SY14 ECO E makes it suitable for casting applications. The colour obtained with SY14 ECO E is light yellow. The high amount of deoxidizing elements contained in this alloy gives shining casted objects in open or closed systems.

**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</b>	10%	Amount of silver contained in the alloy
<b>Density</b>	11.3	(g/cm <sup>3</sup> )
<b>Melting Range</b>	820-905	Solidus - Liquidus (°C)
<b>Hardness</b>	100-/-	Annealed - Hardened (HV)

**Mould casting**

Put first the alloy in the crucible and cover it with gold. Heat the metal 50-100°C more than Liquidus temperature, while protecting the melting with a reducing flame or keeping it in protective atmosphere. Heat the mould at 180-200°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**

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**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 50-150°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 15-30% 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, removal of sprue button is suggested. 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>SY 14 ECO E</b>
<b>FINENESS</b>	<b>585 (14K)</b>
<b>COLOR</b>	<b>YELLOW</b>



**Brief description**

Pre-Master alloy for yellow gold 9, 10 and 14K. The formulation of SY 14 ECO E makes it suitable for casting applications. The colour obtained with SY 14 ECO E is light yellow. The high amount of deoxidizing elements contained in this alloy gives shining casted objects in open or closed systems.

**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</b>	10%	Amount of silver contained in the alloy
<b>Density</b>	12.8	(g/cm <sup>3</sup> )
<b>Melting Range</b>	845-890	Solidus - Liquidus (°C)
<b>Hardness</b>	120-/-	Annealed - Hardened (HV)

**Mould casting**

Put first the alloy in the crucible and cover it with gold. Heat the metal 50-100°C more than Liquidus temperature, while protecting the melting with a reducing flame or keeping it in protective atmosphere. Heat the mould at 180-200°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**

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**Mechanical work**

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**Annealing**

Heat the metal in protective atmosphere at 670°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 50-150°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 15-30% 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, removal of sprue button is suggested. Always pay attention to the cleanliness of the scraps, de-greasing and pickling before adding them to new metal is suggested.