

<b>PRODUCT CODE</b>	<b>SY113</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 SY113 makes it suitable for casting applications. The colour obtained with SY113 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>SY113</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 SY113 makes it suitable for casting applications. The colour obtained with SY113 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>SY113</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 SY113 makes it suitable for casting applications. The colour obtained with SY113 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.