

<b>PRODUCT CODE</b>	<b>SY 18 418</b>
<b>FINENESS</b>	<b>750 (18K)</b>
<b>COLOR</b>	<b>LIGHT YELLOW</b>



### Brief description

Master alloy for 18K yellow gold casting. Gold produced with SY18 418 has a light-yellow shade. This alloy is especially suggested when casting in closed systems, with or without wax settings of precious stones. The hardness of gold produced with SY 18 418 can be increased with heat treatment.

### 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>	42%	Amount of silver <u>contained</u> in the alloy (%)
<b>Density</b>	14.9	(g/cm <sup>3</sup> )
<b>Melting Range</b>	880-900	Solidus - Liquidus (°C)
<b>Hardness</b>	150-240	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

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### Mechanical work

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### Annealing

Heat the metal in protective atmosphere at 660°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

Heat the metal in protective atmosphere at 275°C for 1-3 hours, then let it cool slowly in protective atmosphere until room temperature is reached.

### 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.