

PRODUCT CODE	SR 18 H
FINENESS	585 (14K)
COLOR	LIGHT RED



Brief description

Master alloy for red gold, 14 and 18K. The formulation of SR 18 H is suitable for mechanical works. The colour obtained with SR 18 H is a light red shade. The hardness of gold produced with SR 18 H can be highly increased with heat treatment only in 18K.

Suitable applications

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

Commercial composition	Cu88 Ag9 Zn3	Alloy's main elements (%)
Density	13.0	(g/cm ³)
Melting Range	905-930	Solidus - Liquidus (°C)
Hardness	140-N.A.	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 keeping it in 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 the highest possible.

Mechanical work

For the best mechanical results, reduce the section of the wire or plate of 50% before the first annealing process and 50 - 70% before further annealing. The first reduction steps should be strong enough to ensure the metal inner part compacting. Lower reduction could lead to grain growth of the metal structure, higher reductions could lead to brittleness.

Annealing

Heat the metal in protective atmosphere at 680°C for 15-30min (depending on the quantity), then cool it in a solution of 90% water and 10% alcohol or in warm water (~40°C).

Hardening

Not suitable.

Casting

Not suitable.

Pickling

Sulfuric acid (H₂SO₄) 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.

PRODUCT CODE	SR 18 H
FINENESS	750 (18K)
COLOR	LIGHT RED



Brief description

Master alloy for red gold, 14 and 18K. The formulation of SR 18 H is suitable for mechanical works. The colour obtained with SR 18 H is a light red shade. The hardness of gold produced with SR 18 H can be highly increased with heat treatment only in 18K.

Suitable applications

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

Commercial composition	Cu88 Ag9 Zn3	Alloy's main elements (%)
Density	15.3	(g/cm ³)
Melting Range	890-910	Solidus - Liquidus (°C)
Hardness	150-300	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 keeping it in 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; a slow cooling of 18K red gold can lead to brittleness.

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 the highest possible, a slow cooling of 18K red gold can lead to brittleness.

Mechanical work

For the best mechanical results, reduce the section of the wire or plate of 50% before the first annealing process and 50 - 70% before further annealing. The first reduction steps should be strong enough to ensure the metal inner part compacting. Lower reduction could lead to grain growth of the metal structure, higher reductions could lead to brittleness.

Annealing

Heat the metal in protective atmosphere at 670°C for 15-30min (depending on the quantity), then 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 from 1 up to 3 hours, then let it cool slowly in protective atmosphere until room temperature is reached.

Casting

Not suitable.

Pickling

Sulfuric acid (H₂SO₄) 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, 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.