

PRODUCT CODE	SW116
FINENESS	375 (9K)
COLOR	PREMIUM WHITE



Brief description

Master alloy for white gold 9, 14 and 18K. The formulation of SW116 is suitable for casting applications. The colour obtained is premium white in 9K and standard white (rhodium plating is suggested) in 14 and 18K. SW116 is recommended for use in closed systems and with wax setting of stones, where it gives a good form filling and reduced shrinkage. Warning: This alloy contains nickel.

Suitable applications

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

Composition	20Ni 15Zn 6Ag	Commercial composition of the alloy
Density	11.0	(g/cm ³)
Melting Range	920-1000	Solidus - Liquidus (°C)
Hardness	145-185	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, wait until the metal reaches ≈500°C, then cool it in water.

Continuous casting

Not suitable.

Mechanical work

Not suitable.

Annealing

Heat the metal in protective atmosphere at 690°C for 25-30 min, wait 1 minute 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

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 100-150°C higher than the liquidus temperature. After casting wait 15-30 min before cooling the metal in warm water (≈40°C). In case of casting with stones, wait 40-45 min.

Pickling

Sulfuric acid (H₂SO₄) 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 the 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.

PRODUCT CODE	SW116
FINENESS	585 (14K)
COLOR	STANDARD WHITE

Brief description

Master alloy for white gold 9, 14 and 18K. The formulation of SW116 is suitable for casting applications. The colour obtained is premium white in 9K and standard white (rhodium plating is suggested) in 14 and 18K. SW116 is recommended for use in closed systems and with wax setting of stones, where it gives a good form filling and reduced shrinkage. Warning: This alloy contains nickel.

Suitable applications

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

Composition	20Ni 15Zn 6Ag	Commercial composition of the alloy
Density	12.8	(g/cm ³)
Melting Range	880-935	Solidus - Liquidus (°C)
Hardness	165-180	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, wait until the metal reaches ≈500°C, then cool it in water.

Continuous casting

Not suitable.

Mechanical work

Not suitable.

Annealing

Heat the metal in protective atmosphere at 690°C for 25-30 min, wait 1 minute 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

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 100-150°C higher than the liquidus temperature. After casting wait 15-30 min before cooling the metal in warm water (≈40°C). In case of casting with stones, wait 40-45 min.

Pickling

Sulfuric acid (H₂SO₄) 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 the 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.

PRODUCT CODE	SW116
FINENESS	750 (18K)
COLOR	STANDARD WHITE

Brief description

Master alloy for white gold 9, 14 and 18K. The formulation of SW116 is suitable for casting applications. The colour obtained is premium white in 9K and standard white (rhodium plating is suggested) in 14 and 18K. SW116 is recommended for use in closed systems and with wax setting of stones, where it gives a good form filling and reduced shrinkage. Warning: This alloy contains nickel.

Suitable applications

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

Composition	20Ni 15Zn 6Ag	Commercial composition of the alloy
Density	14.7	(g/cm ³)
Melting Range	875-900	Solidus - Liquidus (°C)
Hardness	200-280	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, wait until the metal reaches ≈500°C, then cool it in water.

Continuous casting

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Mechanical work

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Annealing

Heat the metal in protective atmosphere at 700°C for 25-30 min, wait 1 minute 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

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 100-150°C higher than the liquidus temperature. After casting wait 15-30 min before cooling the metal in warm water (≈40°C). In case of casting with stones, wait 40-45 min.

Pickling

Sulfuric acid (H₂SO₄) 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 the 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.