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| <b>PRODUCT CODE</b> | <b>SAG C</b>  |
| <b>FINENESS</b>     | <b>925</b>    |
| <b>COLOR</b>        | <b>SILVER</b> |



#### Brief description

Master alloy for silver, 800, 925 and 950 fineness. The silver produced with SAG C is suitable for casting applications. Thanks to its high amount of deoxidizing elements, this alloy helps to reduce the surface oxidation of silver. This alloy is especially suggested in case of stones setting. The hardness of silver produced with SAG C can be slightly 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

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| <b>Composition</b>   | Cu74 Zn22 | Commercial composition of the alloy |
| <b>Density</b>       | 10.3      | (g/cm <sup>3</sup> )                |
| <b>Melting Range</b> | 805-900   | Solidus - Liquidus (°C)             |
| <b>Hardness</b>      | 90-105    | Annealed - Hardened (HV)            |

#### Mould casting

Put first the alloy in the crucible and cover it with pure silver. 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

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#### Mechanical work

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#### Annealing

Heat the metal in protective atmosphere at 600°C for 15-20 min, then quickly cool it in a solution of 50% water and 50% alcohol or in warm water (≈40°C).

#### Hardening

Heat the metal in protective atmosphere at 300°C from 1 up to 3 hours, then let it cool slowly in protective atmosphere until room temperature is reached.

#### Casting

Cylinders' temperature should be 500-700°C, based on casted items' size and models' intricacy. It is preferable to pre-melt the alloy with silver 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).

#### 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 the sprue button is suggested. Always pay attention to the cleanliness of the scraps, pickling before adding them to new metal is suggested.