

**INSTRUCTIONS FOR MASTER ALLOY #S-86**

**# S-86** is a **New Age -master alloy** for adding to fine silver to make Sterling Silver. Based on our proprietary Sterling Silver, this master alloy was developed for those who wish to alloy their own sterling. **# S-86** will cast without fire scale. The advantages over standard sterling are: **Reduced gas porosity.** **# S-86** contains deoxidizers which resist oxygen absorption. **Reduced shrinkage porosity.** Better solidification characteristics reduce shrinkage porosity.

**MIXING** Use 92.5% fine silver & 7.5% **S-86**. (We recommend using 92.7% fine silver & 7.3% **S-86**). Example: 500 gms, add 462.5 gms of fine silver & 37.5 gms of **S-86**.

**MELTING** We do recommend pre-alloying all master alloy with fine silver followed by aggressive stirring & fluxing to assure a uniform mixture before using it for casting.

**Step : 1** Pre- Alloying (Fine silver + master alloy) Temperature **1035° - 1045° C**  
**1895° - 1913° F**

**Step : 2** Casting Temperature for ingots or bars **1020° - 1040° C**  
**1868° - 1904° F**

Temperature for continuous casting **980° to 1020° C**  
**1796° to 1868° F**

Temperature for static casting in bars **1020° to 1040° C**  
**1868° to 1904° F**

Ingot molds should be well heated to **121° C / 250° F** before pouring metal.

**RE MELTING:** We recommend a 50% Fresh / 50% Scrap mix. Clean scrap well before re-melting.

**FLUXING:** We recommend a Boric Acid flux, skim off any surface oxides before pouring. Carbon or charcoal fluxes are not recommended.

**QUENCHING:** Cast ingots may be quenched immediately.

**PICKLING:** Hot Sparex solution (sodium bisulfate) or 10% Sulfuric Acid can be used as a pickle.

**FABRICATION:** Use the same fabrication procedures as those used on regular Sterling Silver.

**ANNEALING:** Coat the jewelry items with boric acid or any oxidation preventing solutions available. A 20 minute anneal at **700° C / 1292° F** followed by water quenching.

**HARDENING:** Place in a pre-heated oven set at **300° C / 575° F** for 1 hour and air cool.

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