

**INSTRUCTIONS FOR MASTER ALLOY #SD**

**# SD** 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. **# SD** will cast without fire scale. The advantages over standard sterling are: **Reduced gas porosity**. **# SD** contains deoxidizers which resist oxygen absorption. **Reduced shrinkage porosity**. Better solidification characteristics reduce shrinkage porosity.

<b>MIXING</b>	Use 92.5% fine silver & 7.5% <b>SD</b> . (We recommend using 92.7% fine silver & 7.3% <b>SD</b> ). Example: 500 gms, add 462.5 gms of fine silver & 37.5 gms of <b>SD</b> .
<b>MELTING</b>	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.
<b>Step : 1</b>	Pre- Alloying (Fine silver + master alloy) Temperature <b>1035° - 1045° C</b> <b>1895° - 1913° F</b>
<b>Step : 2</b>	Casting Temperature for ingots or bars <b>1020° - 1040° C</b> <b>1868° - 1904° F</b>
	Temperature for continuous casting <b>980° to 1020° C</b> <b>1796° to 1868° F</b>
	Temperature for static casting in bars <b>1020° to 1040° C</b> <b>1868° to 1904° F</b>

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

**REMELTING:** 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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