
INSTRUCTIONS FOR MASTER ALLOY #S-57-NA

S-57NA 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-57NA** will cast without fire scale. The advantages over standard sterling are: **Reduced gas porosity.** **#S-57NA** contains deoxidizers which resist oxygen absorption. **Reduced shrinkage porosity.** Better solidification characteristics reduce shrinkage porosity.

MIXING Use 92.5% fine silver & 7.5% **S-57NA**. (We recommend using 92.7% fine silver & 7.3% **S-57NA**). Example: 500 gms, add 462.5 gms of fine silver & 37.5 gms of **S-57NA**.

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 **STATIC CASTING PARAMETERS:**

Temperature for ingots or bars **1020° - 1040° C (1868° - 1904° F)**
Ingot molds should be well heated to **121° C / 250° F** before pouring metal.

CONTINUOUS CASTING PARAMETERS:

Crucible Temp for Continuous Casting : **1010° to 1038° C (1850° to 1900° F)**
Die Temp for Continuous Casting: **910° to 940° C (1675° to 1725° F)**
Sheet Drawing rate for Continuous Casting : **190 mm / min (7.5 inches per min)**
Draw Roll Dwell time & pulse rate : **1 second at 4 mm pulse rate**

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.

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.

TECHNICAL ASSISTANCE Always available... Call 1-800-999-3463 / 1-800-999-FINE
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