

ABI Precious Metals

Sterilite Sterling (250M / 250B)

Technical Tips for Investment Casting

Graining – We recommend pre-graining sterialloy with high purity fine silver (.9999+) prior to casting to achieve the best quality results. Blended Sterilite Sterling is available for a small cost premium.

The following sterialloy blending procedure is recommended:

- Layer the melt. Fine silver on the bottom and top, with sterialloy in the middle
- Put a tiny pinch of flux on the Sterilite (Combine Borax and Boric Acid).
- Turn on power and take temperature to the alloying point 1010°C (1850°F)
- Between the melt point 875°C (1610°F) and the alloying temperature of 1010°C (1850°F), either “pulse” the stirring feature if you have a Neutec machine or stir the melt if you have a machine that is “melt accessible”.
- Pour molten metal into cold clean water to form Sterling grain.

Casting – The casting instruction sheet gives a more detailed breakdown of temperature but not everyone will be using a machine that gives accurate temperatures or may be hand pouring. A normal rule of thumb is 100°-150°F over melt, but depending on the design to be cast and spru-size, sometimes experimenting with temperatures is a must.

Quench or Cool Down – After casting at a determined flask and melt temperature, per design, the flask may be quenched at the normal 15-30 minute times or it can also be left to cool down to room temperature for increased hardness. Use caution on this step since some cracking could develop on certain designs.

Metal Re-Usage – 50% old 50%new can be used, but 60/40 is always better.

Note: it is very important that used metal be pickled and thoroughly cleaned prior to use. Contamination can cause serious problems with Sterling Silver casting. Refer to ABI’s website for more detail.

Pickling – 250 does not necessarily need to be pickled, but sometimes if it is a cast at extreme temperatures, oxide can form. A pickle of 10% nitric acid or Sparex heated to 120°-150°F can be used. If bombing is done, make sure that the pieces are neutralized in baking soda water.

Flask Temperature – We recommend the following based on the size of the piece cast:

Tiny Pieces	1050-1150°F (565-622°C)
Ladies	950-1050°F (510-565°C)
Men’s	850-1000°F (454-538°C)
Bracelets	750°-850°F (399-454°C)