

Tech Tip: New hard De-Ox Sterling Casting and Heat Treating

ABI's improved hard *Sterilite #127* –B casts better than traditional Sterling without any significant changes to your casting process.

- Cast temps between 980°C-1010°C (1796°F-1850°F) – very fluid alloy which will fill thin patterns easily.
- Breaks out slightly darker than *Sterilite #250* and brightens right up with sodium bi-sulfate or citric acid pickling.
- Harder than Sterling as cast when left for 20 minutes before quench and break out.
- Excellent heat treating properties.

Heat treating can be accomplished two ways with this alloy. *Method A* is quick and gets close to maximum hardness but is less consistent. *Method B* is more time consuming but is more consistent and it achieves the maximum hardness (116 V).

Method A:

1. After casting, allow pieces to cool 12 minutes and then quench carefully, don't swish the flask.
2. After removing the investment, clean and pickle pieces, complete pre-polish.
3. Place pieces on a fire brick or hearth plate and place in a 286°C (550°F) oven for 2 hours, remove then air cool slowly. Do not quench!
4. Pickle clean and polish, do not heat pieces or they will become soft again.

Method B:

1. After casting 20 minute quench . Once the pieces are de-vested, clean and pickle them. Place them on a fire brick or hearth plate in an oven heated to 625°C for 15 minutes and then quench while red hot into clean water.
2. The piece can now be pickled again and pre-finished.
3. Place piece on a fire brick or hearth plate and place in a 286°C (550°F) oven for 2 hours, remove then air cool slowly. Do not quench!
4. Pickle and clean the pieces, do not heat pieces or they will become soft again.
5. After these steps, finish as normal.

Method B will provide the maximum hardness (116 V) and the most consistent results. The *Sterilite #127-B* is excellent for springs, bangles, catches and thin walled, light weight pieces needing maximum hardness. The harder pieces last longer, polish up faster and give you excellent spring properties. *ABI* also recommends the *Sterilite #127-B* for all your casting applications.