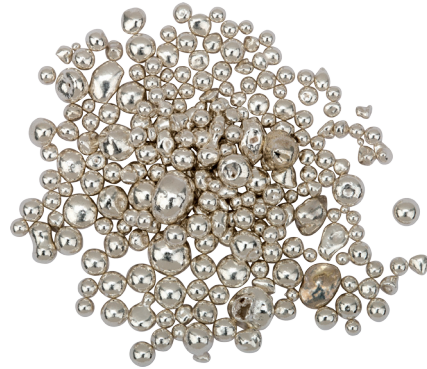


STULLER CONTINUUM[®]

STERLING SILVER

Developed by Stuller, Continuum sterling silver has more than 95% precious metal content. This patented sterling silver's superior oxidization and tarnish resistance allows for a longer lasting finish. Continuum's mechanical properties fall between those of 14K yellow gold and most other sterling silver alloys. It can easily be age hardened up to 150 HV, making it comparable to the as-cast hardness of 14K gold. This versatile alloy can be used for casting, die striking, and producing mill products.



Physical Properties

- Color: Grade 1 white
- Density: 10.42 g/cc
- Melt Range: 1680°F-1730°F (916°C-945°C)

Mechanical Properties

- As-Cast Hardness: 97 HV-117 HV
(more than 1/3 harder than regular sterling silver)
- Annealed Hardness: 75 HV
- Age Hardened: 150 HV
- Ultimate Tensile Strength: 35,000 psi
- Yield Strength: 17,000 psi
- Elongation after annealing: 35%
- Elongation after age-hardening: 30%

Age Hardening

Continuum sterling silver can be age hardened in one of two ways:

1. Two step age hardening

- 1330°F-1450°F (725°C-790°C) for 15-30 minutes followed by immediate quench in water
- 800°F (428°C) for 15-30 minutes followed by either air cool or water quench

2. Single step age hardening

Note: Single step hardening works only when the cast piece has been rapidly quenched in water soon after button has become solid

- 800°F (28°C) for 15-30 minutes followed by either air cool or water quench

Annealing

- 1330°F-1450°F (725°C-790°C) for 15 minutes, or temp is systemically stable followed by immediate quench in water

Cold Working Considerations

- Can be worked much like typical sterling silver
- Maximum recommended total reduction during cold working is 60%

Investment Casting Mold Temperatures and Recommendations

- Similar to that of any other sterling silver
- Typical calcium sulfate (gypsum) bonded investment can be used
- Light: 1100-1150°F (595-620°C)
- Medium: 900-1000°F (480-535°C)
- Heavy: 850-925°F (455-500°C)

Approximate Flask Temperatures (Range/Guideline)

- Filigree: 1150-1200°F (620-650°C)
- Light: 1100-1150°F (595-620°C)
- Medium: 900-1000°F (480-535°C)
- Heavy: 850-925°F (455-500°C)

Approximate Melt Temperatures

We recommend a superheat of 100°F-150°F above the melting point of the alloy. Therefore, the set temperature point in your casting machine should be

- Light: 1890°F (1030°C)
- Medium: 1850°F (1010°C)
- Heavy: 1830°F (1000°C)

Enameling

- Can be enameled by traditional high temperature fired enamel

Protective Cover

- When melting in casting equipment, an inert gas, such as argon, can be used as a protective cover

For the Bench Jeweler

- Can be fused without using solder
- Wire can be balled with a torch
- Sheet can be reticulated