

SILVER ALLOY 50

Silver Alloy 50 Technical Data

Uses

Silver Alloy 50 is a general purpose braze filler metal. The alloy can be used successfully on nearly all nickel, iron and copper based alloys. In certain instances, special fluxes may be required to obtain good wetting and bonding. In brazing gray cast iron, it is necessary to treat the surface prior to brazing to remove the graphite. This will ensure good wetting by the brazing filler metal.

Brazing Characteristics

Silver Alloy 50 is a eutectic type, free-flowing filler metal that, because of its narrow melting range, is less sensitive to the rate of heating and should not liquate (separate into low and high melting constituents). This high fluidity makes well-fitted joints essential and prevents 'bridging' or large fillet formation. Some base metals when brazed under high stress may crack during brazing when the stressed base metal is wetted by the brazing filler metal. This is a form of stress corrosion cracking. The low flow temperature of Silver Alloy 50 is below the stress relaxation temperature of some nickel-based alloys. The cure is to relieve the stress before the brazing ally is applied. A higher melting brazing filler metal may be preferred since stress relief will then occur before the filler metal melts.

Properties of Brazed Joints

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal.

Specifications

Silver Alloy 50 conforms to: American Welding Society (AWS) A5.8/A5.8M BAg-1a, Society of Automotive Engineers (SAE)/AMS 4770

Available Forms

Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.

**** Contains cadmium – poisonous fumes may be formed when heated.**

Do not breathe fumes. Use only with adequate ventilation such as fume collectors, exhaust ventilators, or air supplied respirators. See American National Standard Z49.1. If chest pain, cough or fever develops after use, call a physician immediately! Keep children away when using!

The Prince & Izant Company recommends using cadmium-free alloys for brazing applications. If you are presently using cadmium bearing alloy and need assistance in identifying a suitable cadmium free substitute, please contact your Prince & Izant Company sales representative.

Compare With

AMS: 4770

AWS: BAg-1a

EN: AG 301

Lucas: Eays-Flo

PI: Silver Alloy 50

UNS: P07500

Specifications

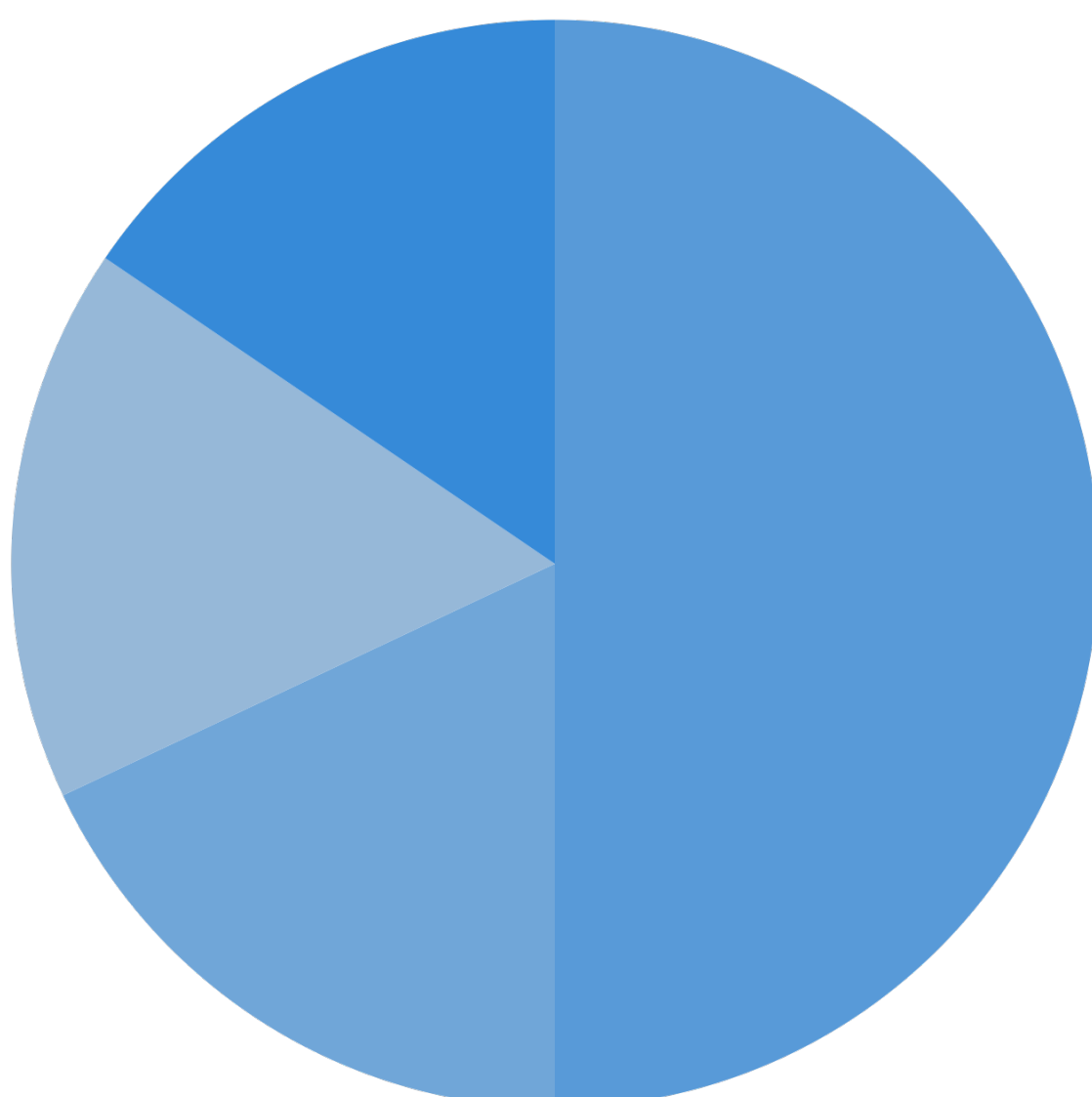
Brazing Temperature Range High: 1275 F / 691 C

Brazing Temperature Range Low: 1225 F / 663 C

Liquidus: 1175 F / 635 C

Solidus: 1160 F / 627 C

Composition



Ag: 50%

Cd: 18%

Zn: 16.5%

Cu: 15.5%