

PHOS/COPPER AND SILVER/PHOS/COPPER FILLER METALS

SILVER BRAZING ALLOYS

SILVER BRAZING – HOW TO

These brazing filler metals are primarily used to join copper to copper, copper to brass, and brass to brass. The phosphorus content serves as a "self-fluxing" agent in joining copper to copper. When brazing brass to copper or brass to brass, use Stay-Silv white brazing flux.

The phos/copper and silver/phos/copper filler metals are not recommended for brazing steel or nickel alloys.

The amount of phosphorus in the phosphorus/copper filler metals (AWS-BcuP series) is critical in determining precise melting range and performance. Proprietary computer-based technology is used to quickly and accurately control the phosphorus content to exacting standards in each of these brazing alloys. Each heat of metal is precisely checked before pouring to assure users of the alloys a phosphorus content to within plus or minus 1/10th of 1 percent, and, even more significantly, a liquidus variation of no more than plus or minus 60° F.

The advantage of this precise control is apparent in automated brazing operations, where even modest variations in flow temperatures can significantly increase the incidence of rejects. Equally important, manual operators no longer need to make adjustments in heating practice from one batch of filler metal to the next to achieve uniform results.

Dynaflow®

This premium, medium range silver alloy has been meticulously formulated to even tighter specifications than the Stay-Silv alloys to mirror the performance of the 15% silver filler metals.

Phosphor Copper 0

This low cost alloy is suitable for most copper-to-copper or brass joints where good fit-up exists, and the assemblies are not subject to vibration nor movement.

Stay-Silv® 2

This economical, low silver alloy, designed to broaden the melting range of Phosphor Copper 0, has proven useful in some specific applications where mechanical properties are not critical.

Stay-Silv® 5 and 6

These medium-range alloys are well suited where close fit-up cannot necessarily be maintained. These filler metals are somewhat more ductile than Phosphor Copper 0 or Stay-Silv 2.

Stay-Silv® 15

For many year's the standard of the industry, the 15% silver alloy has proven its value. This filler metal is excellent for situations in which close fit-up does not exist, and where agitation and vibration in service are involved.

| ALLOY | Silver % | Phos % | Melting Range | | Fluidity Rating* | Recommended Joint Clearance | Specification** | |
|-------------------|----------|--------|---------------|----------|------------------|-----------------------------|-----------------|-------------|
| | | | Solidus | Liquidus | | | AWS A5.8 | FED QQB650B |
| Phosphor Copper 0 | 0 | 7.10 | 1310 | 1475 | 5 | .002/.005 | BCuP-2 | BCuP-2 |
| Stay-Silv 2 | 2 | 7.00 | 1190 | 1450 | 4 | .003/.005 | BCuP-6 | |
| Stay-Silv 5 | 5 | 6.00 | 1190 | 1500 | 3 | .003/.006 | BCuP-3 | BCuP-3 |
| Stay-Silv 6 | 6 | 6.50 | 1190 | 1425 | 5 | .002/.005 | | |
| Dynaflow | 6 | 6.10 | 1190 | 1465 | 3 | .003/.006 | | |
| Stay-Silv 15 | 15 | 5.00 | 1190 | 1480 | 3 | .003(.006 | BCuP-5 | BCuP-5 |

* High numbers indicate fluidity within the melting range.

** Stay-Silv® 15 also meets Fed. Spec. QQB654A, Grade III and Mil. Spec. B-15395-A, Grade III.



Flats (F) are the most popular



| | PART NUMBER | WIRE SIZE | Approx. No. of Rods Per Pound | PRICE PER LB |
|--------------------------|---------------|-------------|-------------------------------|--------------|
| PHOSPHOR COPPER 0 | 0620S | 1/8" sq. | 11 | \$19.90 |
| | 0620R | 1/8" rd. | 14 | \$19.90 |
| | 0620F | .050 x 1/8" | 28 | \$18.90 |
| | 0520S | 3/32" sq. | 20 | \$19.90 |
| | 0520R | 3/32" rd. | 24 | \$19.90 |
| STAY-SILV 2% | 2620R | 1/8" rd. | 14 | \$25.52 |
| | 2620F | .050 x 1/8" | 28 | \$25.25 |
| | 2520R | 3/32" rd. | 24 | \$25.52 |
| STAY-SILV 5% | 5620S | 1/8" sq. | 11 | \$43.94 |
| | 5620R | 1/8" rd. | 14 | \$43.94 |
| | 5620F | .050 x 1/8" | 28 | \$42.15 |
| | 5520S | 3/32" sq. | 20 | \$43.94 |
| | 5520R | 3/32" rd. | 24 | \$43.94 |
| STAY-SILV 6% | 6620S | 1/8" sq. | 11 | \$44.81 |
| | 6620R | 1/8" rd. | 14 | \$44.81 |
| | 6620F | .050 x 1/8" | 28 | \$44.02 |
| | 6520R | 3/32" rd. | 24 | \$44.81 |
| DYNAFLOW | D620S | 1/8" sq. | 11 | \$48.00 |
| | D620R | 1/8" rd. | 14 | \$48.00 |
| | D620F | .050 x 1/8" | 28 | \$47.00 |
| | D520S | 3/32" sq. | 20 | \$48.00 |
| | D520R | 3/32" rd. | 24 | \$48.00 |
| **STAY-SILV 15% | 15620S | 1/8" sq. | 11 | \$72.50 |
| | 15620R | 1/8" rd. | 14 | \$72.50 |
| | 15620F | .050 x 1/8" | 28 | \$69.95 |
| | 15520S | 3/32" sq. | 20 | \$72.70 |
| | 15520R | 3/32" rd. | 24 | \$72.70 |