



T H E H A R R I S P R O D U C T S G R O U P  
A L I N C O L N E L E C T R I C C O M P A N Y  
4501 Quality Place • Mason, OH 45040 U.S.A Tel: 513-754-2000 Fax: 513-754-6015

## TECHNICAL SPECIFICATION SHEET

ISO 9001  
Cert. No. 31598

### PHOS BRONZE C WELDING WIRE

**NOMINAL COMPOSITION:**

Phosphorus	.010-0.35 %	Tin	7.0-9.0 %
Lead	0.02 % max.	Zinc	0.20 % max
Copper	Balance	Iron	0.10 % max
Others	.50 % max.		

**PHYSICAL PROPERTIES:**

Solidus	1620 ° f (882 °C)	Liquidus	1880 °f (1027 °C)
Yield Strength	35,000 psi	Tensile Strength	66,000 psi
Elongation	45 %	Brinell Hardness	90-100 HB

**APPLICATION:**

Used to weld base metals of steel, cast iron, copper, brass, and bronze, and it is the Ideal overlay on shafts, propellers, housings, couplings, bushings, valve seats, pumps, and other surfaces needing a bronze wearing surface.

**RECOMMENDED WELDING PARAMETERS:**

**\*GMAW (MIG) Parameters** (DC Reverse Polarity) Electrode Positive Spray transfer

<u>Wire Diameter</u>	<u>Amps</u>	<u>Volts</u>	<u>Argon (cfh)</u>	<u>Wire Feed ipm</u>
.030	130-140	25-26	25	340-450
.035	140-160	26-27	30	280-400
.045	165-185	27-28	30	200-300
1/16	285-335	28-30	40	150-210

**\*GTAW (Tig) Parameters** (DCSP) <sup>2</sup> Electrode negative or ACHF

<u>Material</u>	<u>2%Thoriated <sup>2</sup></u>	<u>Filler Wire Size</u>	<u>Amps (DC)</u>	<u>Amps (AC)</u>	<u>Gas Cup</u>	<u>Argon(cfh)</u>
1/16"	1/16"	1/16"	100-120	100-120	3/8-1/2	15
3/32"-1/8"	3/32"	3/32"	185-205	165-195	7/16-1/2	15
3/16"	1/8"	3/32"-1/8"	300-350	255-300	7/16-1/2	20
1/2"	3/16"	1/8"	615-640	440-185	1/2	25

\* All parameters are suggested as basic guidelines and will vary depending on joint design, number of passes and other factors.

**SPECIFICATION COMPLIANCE: ANSI/AWS A5.7 & AMSE SFA A5.7 ERcUSn-C CDA 521**

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Any suggestion of product applications or results is given without representation or warranty, either expressed or implied. Without exception or limitation, there are no warranties of merchantability or of fitness for particular purpose or application. The user must fully evaluate every process and application in all aspects, including suitability, compliance with applicable law and non-infringement of the rights of others. The Harris Products Group and its affiliates shall have no liability in respect thereof.

**WARNING: PROTECT yourself and others. Read and understand this information.**

**FUMES AND GASES can be hazardous to your health.**

**ARC RAYS can injure eyes and burn skin.**

**ELECTRIC SHOCK can KILL.**

- Before use, read and understand the manufacturer's instructions, Material Safety Data Sheets (MSDS), and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- Do not touch live electrical parts.
- See American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126; OSHA Safety and Health Standards, available from the U.S. Government Office, Washington, DC 20402.

For technical support and product information, visit our web site at [www.harrisproductsgroup.com](http://www.harrisproductsgroup.com)

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