

Datasheet CM04

# Phos-C

## **Classification**

AWS.A5.7 ERCuSn-C UNS C52100

## **Description**

TALWELD PHOS-C (ex China) and Phos-C Weld (ex USA) wires contain 8% tin. They are harder and stronger than AWS 5.7 ER CuSn-A, and are preferred for welding phosphor bronzes, high strength bronzes and brasses. The alloys' colour matches phosphor bronze very well.

# **Application**

TALWELD PHOS –C and Phos-C Weld wires can be used for repairs to gun-metal, phosphor bronze, aluminium bronze and silicon bronze parts/components, including Bronze ship propellers, bearing surfaces, impeller blades and other castings. They can also be used for joining copper alloys to steel and may be also be used for some cast irons.

#### Shielding Gas

Welding grade Argon or Argon/Helium mixtures

#### Chemical Composition of Solid Wire

| Cu      | Zn           | Sn        | Fe           | Р           | Al           | Pb           | Total<br>Others |
|---------|--------------|-----------|--------------|-------------|--------------|--------------|-----------------|
| Balance | 0.20<br>Max. | 7.0 – 9.0 | 0.10<br>Max. | 0.10 – 0.35 | 0.01<br>Max. | 0.02<br>Max. | 0.50<br>Max.    |

## Typical Mechanical Properties of Weldmetal

| Tensile strength | Yield strength | Elongation |  |
|------------------|----------------|------------|--|
| 480 MPa          | 320 MPa        | 24%        |  |

## Packaging and Machine Settings - GMAW

| Diam. (mm)    | 1.2     |  |
|---------------|---------|--|
| Spool (300mm) | 13.6 kg |  |
| Volts         | 21-28   |  |
| Current, A    | 160-240 |  |

| Diam. | 13.6kg Spool<br>Talweld Phos-C | 13.6kg Spool<br>Phos-C Weld |  |  |
|-------|--------------------------------|-----------------------------|--|--|
|       |                                |                             |  |  |
| 1.2mm | CMCPHOS-C12                    | CMWPHOS-C12                 |  |  |

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