TECHNICAL INFORMATION SHEET

HARRIS 15 LOW FUMING BRONZE

NOMINAL CHEMICAL COMPOSITION%:

Tin	0.80 – 1.10
Copper	56.0 – 60.0
Iron	0.25 – 1.20
Manganese	0.01 - 0.50
Silicon	0.04 - 0.15
Zinc	Remainder
Lead	0.05 maximum
Aluminum	0.01 maximum
Others(total)	0.50 maximum

DESCRIPTION:

Harris 15 Low Fuming Bronze is copper- zinc braze rod developed primarily to braze steel and some cast iron grades including malleable and grey iron. It can be used to join copper but due to the elevated melting temperature care must be taken during brazing to avoid overheating or melting the copper. It is used with the oxy-fuel process.

Harris 15 is considered a "braze-welding" rod as this copper/zinc alloy exhibits minimal capillary action during brazing. This limits joint design primarily to lap, tee, and butt joints. Butt joints require some edge preparation typically incorporating beveled edges to provide a location for filler metal to be applied and to ensure alloy penetration to the joint root. To braze; heat the base metals to brazing temperature and manually deposit the rod along the joint.

TYPICAL PHYSICAL PROPERTIES:

Solidus	1590ºF (866°C)
Liquidus	1630°F (888°C)
Brazing Range	1670°F- 1750°F (910°C -955°C)

AVAILABLE FORMS:

Braze rods are common. Preformed rings are available and Harris 15 can also be wound on spools for semi-automated braze applications.

CORROSION RESISTANCE:

Corrosion resistance is similar to most high zinc brass alloys. Care should be taken on service conditions where water immersion is involved as dezincification is a potential issue.

RECOMMENDED FLUX:

Rods are available bare or flux coated. For bare rods use Harris #600 Brazing Flux. This flux can be applied as a powder or mixed with water to form a paste. Bare rods can also be slightly heated with a torch flame and dipped in the flux. The flux will adhere to the heated end, (referred to as "hot-rodding"). Remove flux residue after brazing.

SPECIFICATION COMPLIANCE:

AWS A5.8 RBCuZn-C, ASME SFA 5.8 RBCuZn-C, ISO 17672 Cu681

SAFETY INFORMATION:

WARNING: PROTECT yourself and others. Read and understand this information.
FUMES AND GASES can be hazardous to your health.
HEAT RAYS, (infrared radiation) from flame or hot metal can injure eyes.

- Before use, read and understand the manufacturer's instructions, Safety Data Sheets (SDS), and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the flame, or heat source, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- See American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes,* published by the American Welding Society, 8669 Doral Blvd., Doral, Florida 33166; OSHA Safety and Health Standards, available from the U.S. Government Office, Washington, DC 20402.

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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.

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