



Harris 5P

Brazing Filler Metal

TECHNICAL DATA SHEET

BRAZING PROPERTIES

Harris 5P silver brazing filler metal designed for copper-to-copper and copper-to-brass applications. Harris 5P flows rapidly when heated quickly to its liquidus, allowing a deep penetration into tight clearance connections. With slower heating, the alloy melting range provides the ability to filler wider gaps. Harris 5P should not be used for brazing steel or other ferrous base metals. In these applications the phosphorus content promotes formation of a low ductility intermetallic phases with the base metal.

CHEMICAL COMPOSITION

Phosphorus	5,8 - 6,2%
Silver	4,5 - 5,5%
Copper	Remainder
Others (total)	ISO Requirements

TYPICAL PHYSICAL PROPERTIES

Solidus	645°C (1193°F)
Liquidus	815°C (1500°F)
Specific weight	8,10 g/cm ³



CORROSION RESISTANCE

Generally similar or higher than the copper base metal, but phosphorus containing alloys, including Harris 5P, should not be used if the braze is exposed to sulfur or sulfur compounds in service.

AVAILABLE FORMS

Rods for manual brazing applications. Brazing rings or spools for automated feeding.

RECOMMENDED FLUX

Harris ECO SMART® boric acid free brazing fluxes (green or black) are an excellent choice to promote sound brazed assemblies, and comply with European REACH requirements. Stay Silv brazing fluxes (white or black) are also recommended. All fluxes above are available in paste or powder form.

SPECIFICATION COMPLIANCE

ISO 17672 CuP 281



SAFETY INSTRUCTIONS

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, Material Safety Data Sheets (MSDS) 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.
 - **EN WARNING** Use of this product may produce fumes containing hazardous compounds. Use local exhaust to keep fumes and gases from all breathing zones.
- Use respirator unless exposure is below exposure limits. Infrared radiation from flame or hot metal can injure eyes. Overexposure to copper fumes may cause fever, chills, congestion and headaches. Consult SDS.

STATEMENT OF LIABILITY - DISCLAIMER

Any suggestion of product applications or results is given without representation or warranty, either expressed or implied. The values of the chemical composition of the alloys are given as a range, as shown in the ISO standard. Actual values can only be found in the Inspection Certificate 3.1. or in the Material Test Report that can be obtained with a cost and upon request concerning one specific batch.

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 noninfringement of the rights of others. The Harris Products Group and its affiliates shall have no liability in respect thereof.