



## TECHNICAL INFORMATION SHEET

### SAFETY SILV® 50N BRAZING FILLER METAL

#### NOMINAL CHEMICAL COMPOSITION%:

Silver	49-51
Copper	19-21
Zinc	26-30
Nickel	1.5-2.5
Other (Total)	0.15

#### TYPICAL PHYSICAL PROPERTIES:

Solidus	1220°F (660°C)
Liquidus	1305°F (707°C)
Brazing Range	1305°F- 1500°F (707°C-816°C)
Electrical Conductivity	15.00 (% IACS)
Density	4.89 (Troy ounces./cu.in.).

#### BRAZING PROPERTIES:

Safety Silv 50N brazing filler metal is engineered for brazing copper, brass, steel, nickel alloys, and stainless steel. These alloy exhibits improved corrosion resistance on stainless steel compared to other silver braze alloy deposits. It is frequently used to braze tungsten carbide to steel and tool steel for cutting tips, drill bits, and saw blades. The 2% nickel addition improves wetting and strength.

#### AVAILABLE FORMS:

Standard wire diameters preform rings, coils, rod, and paste. It's also available as a silver-copper-silver, (1-2-1 ratio), clad strip, AgClad™ 50N.

#### SPECIFICATION COMPLIANCE:

ANSI/AWS A5.8, ASME SFA 5.8, Class BAg-24,  
AMS 4788, ISO 17672 Ag 450

#### RECOMMENDED FLUX:

Stay Silv® white flux is suitable for some applications. Stay Silv® black brazing flux is often used if brazing stainless steel or tungsten carbide and where heating cycles are prolonged or focused as in induction brazing. Harris ECO SMART® boric acid free flux, (powder or paste), is an excellent choice to promote sound brazed assemblies and comply with European REACH requirements.

#### 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, 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.
- 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.

#### STATEMENT OF LIABILITY- DISCLAIMER

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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