



## TECHNICAL INFORMATION SHEET

### HARRIS SAFETY SILV 40 BRAZING FILLER METAL

#### NOMINAL CHEMICAL COMPOSITION%:

Silver	39-41 %
Copper	29.5-31.5 %
Zinc	27.5-31.5 %
Other (Total)	0.15

#### TYPICAL PHYSICAL PROPERTIES:

Solidus	1250°F (677°C)
Liquidus	1350°F (732°C)
Brazing Range	1350°F- 1500°F (732°C -815°C)
Electrical Conductivity	19.18 (%IACS)
Electrical Resistivity	8.94
Density	4.76 (Troy ounces./cu.in.).
Specific Gravity	9.12

#### BRAZING PROPERTIES:

A cadmium free filler metal suitable for joining copper, copper alloys, and steel. It can also be used to braze stainless steel and nickel alloys. These alloys are often used for corrosion applications or high temperature service, so suitability for the brazing alloy should be evaluated for the intended condition. Safety Silv 40 is a good replacement for hazardous cadmium bearing filler metals. Safety Silv 40 is a moderate temperature alloy with a medium plastic range. This characteristic makes it suitable for brazing assemblies with wider gaps.

#### CORROSION RESISTANCE

Generally similar to the copper base metal, but zinc containing alloys, including Safety Silv 40, should not be used if the braze is exposed to concentrated corrosive liquid for a long period of time.

#### AVAILABLE FORMS

Standard wire diameters, preform rings, coils, strip,

#### RECOMMENDED FLUX:

Stay Silv white flux or where heating cycles are extended Stay Silv Black flux.

#### SPECIFICATION COMPLIANCE:

Harris Products Internal Specifications

#### 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 Dorland Blvd., Dorland, 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.

#### THE HARRIS PRODUCTS GROUP

A LINCOLN ELECTRIC COMPANY

4501 Quality Place • Mason, OH 45040 U.S.A Tel: 513-754-2000 Fax: 513-754-6015

Additional information available at our web site: [www.harrisproductsgroup.com](http://www.harrisproductsgroup.com)