



TECHNICAL INFORMATION SHEET

SAFETY SILV® 49NM™ BRAZING FILLER METAL

CHEMICAL COMPOSITION %:

Silver	48.0 – 50.0
Zinc	21.0 – 25.0
Copper	15.0 – 17.0
Nickel	4.0 – 5.0
Manganese	7.0 – 8.0
Other (Total)	0.15

PHYSICAL PROPERTIES:

Solidus 1260° F (682° C)
Liquidus 1290° F (698° C)

BRAZING PROPERTIES:

Safety Silv 49NM is cadmium free brazing filler metal frequently used to braze tungsten carbide inserts to steel. The nickel and manganese additions improve wetting and increase joint strength. For longer carbide sections cracking may occur during cooling due to the different coefficients of expansion. In these applications 49NM Clad Strip should be considered.

AVAILABLE FORMS

Rod, Strip, shims, coil, rings

SPECIFICATION COMPLIANCE:

AWS A5.8 Classification BAg-22. ASME SFA 5.8, BAg -22.

RECOMMENDED FLUX:

Stay-Silv® black brazing flux is often used to braze tungsten carbide and other applications. It is especially helpful when heating cycles are prolonged or where heat is focused as in induction brazing. Harris ECO SMART™ Boric Acid Free High Heat flux, (powder and paste), is an excellent choice to promote sound brazed assemblies and comply with European REACH requirements.

Remove all flux residues after brazing.

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

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