



## TECHNICAL INFORMATION SHEET

### HARRIS NICK® LEAD FREE SOLDER

#### NOMINAL CHEMICAL COMPOSITION%:

Silver	.05-.15
Tin	remainder
Nickel	.15-.25
Copper	3.5-4.5

#### PHYSICAL PROPERTIES:

Solidus 438°F (225°C)  
Liquidus 729°F (387°F)

#### SOLDERING PROPERTIES:

Nick lead-free plumbing solder has been specifically formulated as a replacement for the tin/lead solders. It has a wide melting range (291°F-144°C) that allows operators to fill small tight fitting pipe connections and also to bridge gaps in large, loose fitting or non-concentric pipe in order to make strong, solid joints. Its ease of application in all types of copper joints makes it the preferred solder of experienced operators and the most forgiving the hands of the less experienced.

#### AVAILABLE FORMS:

Standard diameters, preformed rings

#### RECOMMENDED FLUX:

Harris Stay Clean paste flux and Harris Bridgit® Burn resistant paste flux are good choices for soldering copper and brass. For copper tube plumbing applications Bridgit Water Soluble flux may also be used. For soldering steel or stainless steel Harris Stay Clean® liquid flux is recommended. Remove flux residue upon completion.

#### SPECIFICATION COMPLIANCE:



National Sanitation Foundation (NSF) Standard 61 for potable water systems, Product is certified to NSF/ANSI 372 and conforms to the lead content requirements for "lead free" plumbing as defined by California, Vermont, Maryland, and Louisiana state laws and the U.S. Safe Drinking Water Act.

ASTM B32, Classification HN

#### 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.**

**SOLDER FLUX may contain chlorides, acids, or other ingredients that are considered hazardous via inhalation, ingestion, or skin or eye contact.**

- 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.

#### 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)