



T H E H A R R I S P R O D U C T S G R O U P
A L I N C O L N E L E C T R I C C O M P A N Y
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TECHNICAL SPECIFICATION SHEET

ISO 9002
 Cert. No. 31598

HARRIS 50/50 TIN-LEAD SOLDER

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.

ALLOY PROPERTIES - 50/50:

The tin lead solder group constitutes the largest portion of solders in use. With some exceptions, the tin lead solders can be used to solder copper and most copper alloys, lead high nickel alloys, and steel. Tin lead solders are not recommended in high stress or vibration joints in the cooling industry due to lack of sufficient elongation properties. Heat sources include soldering guns, irons, and torch applications. **Lead bearing solders are not to be used in potable water systems.**

NOMINAL SOLDER COMPOSITION:

Tin 50%
 Lead 50%

PHYSICAL PROPERTIES: Mechanical properties of bulk solder

Solidus	360°F(182°C)	Electrical Resistivity	15.9 n Ω·m at 77 °F (25°C)
Color	Gray Silver	Liquidus	420°F(216°C)
Brinell Hardness	14HV	Density	8.90 g/cm ³
Shear Strength	5200 psi	Tensile Strength	6000 psi
Electrical Conductivity	10.9% IACS at 68°F (20°C)		

AVAILABLE FORMS:

Standard wire diameters
 Preformed Rings

SPECIFICATION COMPLIANCE:

ASTM B32 Alloy Grade Sn 50, J-STD-006

RECOMMENDED FLUX:

Stay Clean soldering fluxes are recommended except on electrical or electronic applications, which require the use of a rosin core solder or 505 neutral flux.

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WARNING: PROTECT yourself and others. Read and understand this information.

FUMES AND GASES can be hazardous to your health.

ARC RAYS can injure eyes and burn skin.

ELECTRIC SHOCK can KILL.

- 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 arc, or both, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- Do not touch live electrical parts.
- See American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126; OSHA Safety and Health Standards, available from the U.S. Government Office, Washington, DC 20402.

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